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Policy Research Issues for Canadian Youth: Transition Experiences of Young Women

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by
Lesley Andres

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Publications Centre
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Abstract

This paper is part of a research paper series that the Applied Research Branch of Human Resources Development Canada commissioned in 2001 to contribute to the development of a research strategy for young Canadians completing their education and starting their careers. The series focuses on various elements of the school-work transitions of Canadian youth.

The purpose of this paper is to provide a comprehensive review of the literature on the transitional experiences of young women. Research has documented that gender differences exist in educational and occupational choices, experiences, and attainments and that these differences have special characteristics. The additional dimensions of marriage and family can also generate differences in transition pathways between women and men.

Two key impressions emerge from this review: how much we know and how little has changed. Female inequality, whether in reference to participation in mathematics and science, different fields of study at post-secondary institutions, employment status, family responsibilities in relation to work, or the income earnings gap, has been remarkably stable over time in the research literature. However, the accounts of persistent stability mask the educational and occupational, and earnings outcomes for certain groups. The least advantaged continue to be female lone parents and low income families.

Several recommendations for further research emerge from the studies reviewed in this paper. Further research is needed, especially using longitudinal research designs, to document changes in attitudes, course selection, post-secondary field chosen and eventual occupational attainment. In addition, policies for access to and participation in education and labour market require monitoring.

Table of Contents

Foreword vii

1. Introduction 1

2. School Subject Choices and Attainments of Girls and Boys 2

2.1 Participation in Mathematics and Science 2

2.2 Family, School, and School Subject Choice 8

3. Participants in Higher Education 10

3.1 University Undergraduate Enrolment and Completion by Young Women and Men 10

3.2 University Graduate Enrolment and Completion 19

4. Career Choices Made by Young Women 26

4.1 Conceptual Issues of Youth Transitions Between School and Work 26

4.2 Career Expectations in Childhood and Adolescence 28

4.3 Educational Expectations and Occupational Outcomes 30

5. Patterns of Labour Market Attachment Relative to Marriage and Dependent Children Status 33

5.1 Conceptual and Measurement Issues Around Women, Marriage, Childbearing, and Work 33

5.2 Women and the Workforce 34

5.3 Patterns of Leaving and Returning Home 38

5.4 Returning to Work After Childbearing 38

5.5 Lone-Parent Families 41

5.6 Changing Family Dynamics 42

6. Income Earnings of Young Women 45

6.1 Overview 45

6.2 Income and Family Status 47

6.3 Wage Discrimination 50

7. Summary and Implications for Further Research 53

7.1 School Subject Choice and Attainments by Girls and Boys 53

7.2 Post-Secondary Participation and Completion Patterns by Young Women and Men 54

7.3 Career Expectations of Young Women 55

7.4 Employment, Family and Income Earnings 55

References 57

Foreword

This document is part of a short research paper series developed in 2001, and commissioned by the Applied Research Branch of Human Resources Development Canada (HRDC). The series focuses on various elements of Canadian youths' experience of school-work transitions. It was developed to add to ongoing discussions surrounding HRDC's youth research strategy.

1. Introduction

The purpose of this paper is to provide a comprehensive review of the literature on the transition experiences of young women. To accomplish this task, this literature review concentrates primarily on scholarly and policy-based literature published within the last ten years. Although the focus of this review is on young Canadian women, studies from other countries – including the United States, Australia, Britain, and several European countries – were included to provide a more in depth understanding of women's experiences in the institutions of education, employment, and the family.

Today, girls and young women in Canada should face unlimited opportunities. No longer are they relegated to a narrow set of educational offerings and career possibilities. However, it is clear that girls' and women's educational and occupational choices, experiences, and attainments have been, and continue to be, different from those of boys and men. The additional dimensions of marriage and family continue to have a considerable impact on how young women's educational and work experiences differ from those of young men. The construct of gender is important in relation to curricular differentiation and school subject choice at the elementary and secondary levels; expectations of parents, school personnel, and self toward educational achievement; choice of fields of study at the post-secondary level; participation and completion of graduate studies; employment and income earnings status; and the relationship between family and employment. Each of these topics, in turn, will be addressed in this paper. This review begins with school subject choices, participation, and attainments of girls and boys.

2. School Subject Choices and Attainments of Girls and Boys

2.1 Participation in Mathematics and Science

Although students participate in many school subjects at the elementary and secondary levels, the majority of research has been devoted to the study of participation in mathematics and science by elementary and secondary girls and boys. Over the past 25 years, results of these studies are remarkably stable. Study after study demonstrates that female students are less likely to enrol in advanced science and mathematics subjects in secondary school and over time, attitudes of girls toward science worsen and girls experience lower levels of self-esteem in relation to science (Catsambis, 1995; Greenfield, 1996; Hatchell, 1998; Weinburgh, 1995; Young & Fraser, 1994). These studies indicate that gender differences in science first become apparent in middle school and continue to increase throughout high school (American Association of University Women, 1992; Linn & Hyde, 1989; Oakes, 1990). Data from the National Assessment of Educational Progress (NAEP) from 1976 to 1990 reveal that gender differences in achievement levels of 9-year-olds are non-existent or negligible. However, by the age of 17, achievement of boys, particularly at the most advanced levels of study is significantly better than that of girls. According to Catsambis (1995) it is well documented that interest, participation, and achievement in advanced level science high school courses are lower for girls than boys. However, she maintains that "despite the numerous findings documenting gender differences in achievements and interests, the processes leading to the under representation of women in science-related careers remain unclear" (p. 243).

Several factors related to gender based participation and achievement in mathematics and science have been identified. The theoretical perspectives underlying these factors include sex-role stereotyping (Kelly et al., 1982; McEwen & Curry, 1987; Pedersen, Elmore, & Bleyer, 1986), self-esteem and self-confidence related perspectives (American Association of University Women, 1992; Debacker & Nelson, 2000; Walz & Bleuer, 1992), and perspectives focussed on knowledge claims and ways of knowing (Kelly, 1987; Walz & Bleuer, 1992).

Recent research suggests that differences in attitudes and achievement in science and mathematics and eventual career choices are due to differential educational experiences offered to girls and boys. These studies have demonstrated that within the classroom setting, boys and girls are treated differently. According to Greenfield (1995) "teachers are more likely to ask

questions of boys; allow boys to call out answers; encourage boys to manipulate apparatus; and offer them praise, criticism, or feedback" (p. 736-737). Studies have also demonstrated that few models in the form of female scientists are presented to high school girls (Hatchell, 1998). Differential treatment extends beyond the classroom. Girls are less likely to have been exposed to science and technology related experiences; they have fewer opportunities to play with science oriented toys and hence are less likely to develop skills associated with science-related ac ities (Greenfield, 1995, 1996; Kahle & Lakes, 1983; Kelly, 1987; Rennie, 1987). Also, although boys are more likely than girls to participate in major science competitions, the gap in participation in science fairs between junior and senior level girls has decreased over the years (Greenfield, 1995). When girls do participate, they opt to submit life science based, rather than physical science or earth science based, projects. Also, whereas boys are more likely to submit research projects grounded in scientific inquiry, girls tend to submit display projects. Participation in science fairs is deemed to positively affect girls' self-confidence and self-image, to have important academic and even professional effects, and may lead them to consider science-related careers.

Increasing the proportion of girls who participate in mathematics and science does not necessarily shift the educational and occupational choices beyond secondary school. In a study of the high school graduating class of 1985 in Rhode Island, Rallis and Ahern (1986) determined that even when women did participate and excel in science and mathematics, significant differences in the planned careers of the men and women persisted. Dick and Rallis (1991) advance a conceptual model of career choice.[1] Socializers – that is, parents, teachers, counsellors, and other individuals – are a central role feature of this model. Dick and Rallis argue that the role of socializers is multidimensional and multidirectional. They can affect a student's beliefs, attitudes and expectations, and experiences. The influence of socializers in relation to experiences, aptitudes, attitudes, and expectations is reciprocal in that students' experiences, attitudes, aptitudes and expectations shape and are shaped by these factors and forces. In addition, the cultural milieu in which a student lives shapes the attitudes and expectations of socializers which in turn influence the student's perceptions and beliefs about career values.

[1] This model of career choice is a modified version of a model of academic choice as formulated by Meece, Parsons, Kaczala, Goff, & Futterman, (1983).

To test the hypothesis that socializers and the cultural milieu exert differential influences on the self-concepts and career values of young women and men, Dick & Rallis (1991) examined the career choices of 59 women and 74 men with strong records of enrolment and achievement in mathematics and science in high school. Results of this study demonstrated that only 19% of women with strong mathematics and science backgrounds (compared with 64% of men with similar backgrounds) intended to pursue careers in science. Women and men who planned science-related careers reported higher levels of parental encouragement. Also, whereas women expressed a need to be genuinely interested in a career, financial rewards in the form of income was considerably more important for men. However, only one significant gender difference was noted in this study. Both women and men who planned to pursue careers in science, and men who did not, were more likely than women who did not plan science careers to indicate that a teacher had influenced their career choices. Dick & Rallis conclude that the influence of a single teacher may "make a critical difference in the decision to pursue careers in science or engineering" (Dick & Rallis, 1991, p. 290).

Based on the findings of this study, Dick & Rallis conclude that it cannot be assumed that women who have excelled in science and mathematics in high school will pursue careers in science and engineering. They speculate that women may enrol in advanced mathematics and science courses in order to gain strong general preparation for post-secondary studies and not for specific preparation for a particular career. Also, they suggest that the influence of socializers may begin to take their toll early in young women's and men's school careers. "Because even high school women with exceptional academic preparation in mathematics and science continue to choose careers in engineering and science in disproportionately low numbers, we can expect a continuance of the under representation of women in these fields" (Dick & Rallis, 1991, p. 290).

The influential role of teachers is supported in a study conducted by Hatchell (1998) which focussed on the relationship between encouragement and expectations by teachers and how young women come to view themselves as high achievers within the science classroom setting. She emphasizes that while expectations of teachers can serve as a form of encouragement, negative expectations can be a powerful source of discouragement. Numerous studies demonstrate that despite equal or higher levels of achievement by girls, teachers tend to have lower expectations for girls than boys. According to Hatchell, "beliefs, like gender inequality,

can become 'natural' within teachers' discourses. Teachers' expectations become crucial in the science classroom where female students need to access alternative discourses in scientific areas" (p. 381). Her research demonstrated that high expectations and encouragement by teachers were critical in shaping girls' educational and occupational choices.

Gender is described as having a consistent influence on attitudes toward science. However, as Weinburgh (1995) notes, findings of various studies produce conflicting results, depending on other considerations such as the discipline under investigation (*e.g.*, biology versus physics), cooperative versus non-cooperative learning settings, grade level of students, and gifted versus non-gifted students. She concludes that it is difficult to determine directionality in the relationship between attitudes and achievement. Through a meta-analysis of 31 studies of attitudes of girls and boys toward science conducted between 1970 and 1991, Weinburgh demonstrated that "over the last 21 years, boys have consistently shown a more positive attitude toward science than girls" (p. 396). The only exception to these findings were between gifted girls and boys where gifted girls reported slightly more positive attitudes toward science. Furthermore, if the date of publication can be used as an indicator, no upward shifts in girls' attitudes were detected over time. Weinburgh asserts that "nothing substantial has been done in 21 years to change attitudes in students, especially for girls" (p. 395).

Studies from various countries have produced similar findings. Young and Fraser (1994) employed the technique of hierarchical linear modelling to examine the interaction between the school environment and processes and sex differences in science achievement of Australian youth. Several key findings were reported. First, gender differences in physics achievement at both the primary and secondary levels declined slightly with age, perhaps as a result of self-selection. Second, differences appeared to be related to social class. Both girls and boys from advantaged homes earned higher physics scores, as did those attending single-sex schools. Most important, however, was that the aggregated socioeducational level of the school was positively related with improved performance by students in physics. They also conclude that because a substantially greater proportion of the variance was due to school effects (rather than the sex of the student), new research should perhaps focus on school level variables rather than individual differences.

A few studies point to the need to incorporate issues of race and ethnicity into analyses of gender differences. For example, Campbell (1991) demonstrated that Asian-American parents were more likely to encourage their daughters and sons equally to pursue and succeed in scientific subjects and careers. Moderate gender differences favouring boys were detected among Latinos; however, no gender differences were evident among African-Americans.

While the existence of gender differences in mathematics and science during students' high school and post-secondary years has been demonstrated across time and countries, other studies suggest that gender differences in achievement, course selection, and attitudes, while non-existent in the elementary years, begin to emerge in the middle grades (American Association of University Women, 1992; Catsambis, 1995; Oakes, 1990). Catsambis (1995) used nationally representative data from a survey conducted in 1988 to examine gender differences in the science-related attitudes and achievements of middle school students in the United States. Analyses were conducted separately for eighth grade white, African-American, and Latino students. In this study, Catsambis demonstrated that gender differences in science occurred first in attitudes, followed by participation in extracurricular activities and expressed interest in various career choices. The strongest finding in relation to girls' disinterest in science was demonstrated by examining extracurricular participation and career choices. Boys were more likely than girls to participate in mathematics and science extracurricular activities and the largest gender differences were between white girls and boys. Test scores revealed that few or no gender differences existed in eighth-grade achievement levels; but when gender differences did exist, female students (regardless of ability group) earned higher science grades than their male counterparts. Results of this study also led to the conclusion that, regardless of race, twice the proportion of boys as girls expressed interest in science-related careers. Catsambis claims that girls' attitudes toward science-related careers appear to be independent of their achievement levels.

Similarly, Canadian studies have explored gender differences in the variables that influence decisions about program choice in both high school and post-secondary education. In relation to choice of program, Gilbert and Pomfret (1991) in the context of making recommendations on the Canadian Scholarship Programmes (which are science and technology focused), claim that female recruitment *to science* is affected by the level of support they receive, academic achievement,

and the ability to assess their own competencies. These factors were less consequential for male recruitment.

Readily available Canadian data on participation and achievement rates in various high school subjects by girls and boys from provincial Ministry of Education web sites[2] confirm that boys are more likely than girls to take advanced level mathematics and physics courses. However, it is not the case that boys consistently outperform girls in these subjects. As the research studies reported above suggest, it is likely that girls enrolled in senior level mathematics and science courses have excelled at and are genuinely interested in these subjects and have been encouraged by parents, teachers, or both, to pursue such studies.

These findings raise another set of questions. Why does the majority of research focus on mathematics and science achievement? According to provincial data, girls are more likely than boys to participate and earn higher grades in subjects such as reading, writing, English, English literature, French, biology, and history. In subjects such as chemistry and geography, girls and boys are equally likely to participate and their achievement levels are similar. What is it about chemistry and geography that encourages – or does not discourage – participation? Why are girls more attracted to subjects such as English and biology?

It could be argued from a human capital or rational choice perspective that girls and boys "choose" subjects that will best help them reach their career and income goals (see Rindfuss, Cooksey, & Sutterlin, 1999). However, as Finnie (2001a) demonstrated, when compared with other fields of study, within two and five years of university graduation women with bachelors' degrees in the areas of mathematics and other physical sciences experienced relatively high levels of unemployment and few opportunities for part-time work. Also, the mean earnings gap in the field of mathematics and physical sciences, five years following graduation, was $5300 in favour of men, compared to $5100 in other social sciences and $1000 in the fine arts and humanities. Claims such as those made by the Council of Ministers of Education, Canada (Canadian Education Statistics Council, 2000) that "the market demand for science graduates is reflected in the high

[2] Provincial data are available on several provincial Ministry of Education internet sites. See for example : http://www.bced.gov.bc.ca/exams/standrep.htm (British Columbia); http://www.learning.gov.ab.ca/k_12/testing/prov_results/results_toc.htm (Alberta); and Saskatchewan Education Indicators (2000). The most recent report by the Council of Ministers of Education, Canada (Canadian Education Statistics Council, 2000) includes minimal data on gender differences at the national level.

earnings and high rates of full-time employment of physical and applied science graduates, relative to graduates in other fields of studies" (p. 5) mask differences in earnings outcomes by women and men and call into question the extent to which research and policies on human resources initiatives are based on masculine liberal discourses which stress the development of certain types of skilled workers (Arnot, 1993; McLaren, 1996).

2.2 Family, School, and School Subject Choice

The sociology of education literature focuses on the relationship between gender socialization by the family and the school. From a cultural reproduction perspective advanced by Bourdieu (1979; 1986), the transmission of capital, in the form of cultural as well as economic resources, occurs at the level of the family. That is, parents transmit capital in the form of dispositions, habits, and attitudes, to their children, resulting in the reproduction of the dominant culture through which background inequalities are converted into differential academic attainments and eventually social status. McCall (1992) builds on Bourdieu's work and maintains that in addition to cultural, social, economic, and symbolic capital, gendered dispositions are another critical form of capital. She argues that gender should not be treated as a secondary determinant to educational and occupational status; rather, it is important to examine the "interaction of gender with class distinction through the lens of embodied capital" (p. 839). Hence, the various forms of capital, including gendered dispositions, are reproduced as advantage or disadvantage. Hughes-Bond (1998) adds that in attempting to foster gender "neutral" educational environments "schools fail to counteract powerful societal messages of what is possible and/or appropriate for females" (p. 283).

From a social and cultural reproduction perspective, it cannot be assumed that gender is defined in the same way by the family and the school. An early but often cited study by Kelly *et al.* (1982) illustrates the extent to which parents have different expectations for their children and the extent to which girls and boys from these homes receive contradictory messages about gender roles. Through questionnaires and interviews with pupils and parents at a comprehensive school (of 11 to 16-year-olds) in England, she found that parents not only attached just as much or more importance to girls' education as to boys', they were also more likely to have higher aspirations for their daughters to continue to post-secondary education than their sons. However, significant differences existed between working class and middle class families.

According to Kelly *et al.,* working class parents were less likely to agree that school lessons were valuable for life after leaving school and that receiving a good education at a young age is important. In addition, the researchers found that "good prospects and security" were identified by parents as more important for boys; for girls, parents were more likely to identify "interesting work and the child's own preference." According to Kelly *et al.*, "this distinction carries with it the implication that boys have to work as providers, but that girls' work is less serious" (p. 289). They conclude that although parents hold high aspirations for their children and provide support for their children's decisions, they are blind to the limitations imposed by learned stereotypical sex roles.

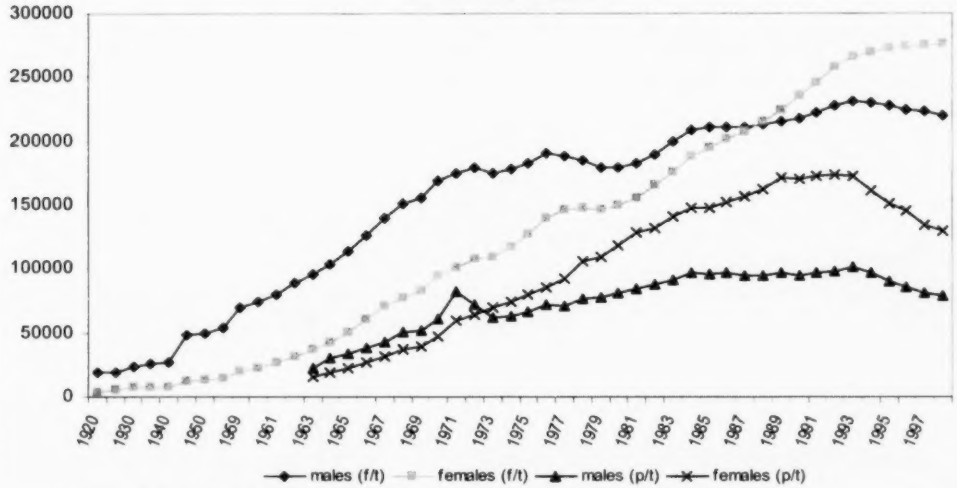
More recently, Dryler (1998) examined how parents affect school subject choices of Swedish girls and boys. Arguing that while gender equality in Swedish society is evidenced by educational and labour force participation rates and high numbers of women in parliament and government, differences in school subject selection continue to exist between girls and boys. This study was informed by social learning theory (Bandura, 1977) which argues that children are encouraged to imitate gender specific behaviour and cognitive developmental theory (Kohlberg, 1986) which posits that because children actively choose who they will imitate, they choose to imitate adults of the same sex. Analyses were carried out on data collected by the Swedish Governmental Commission on Educational Inequality matched with Statistics Sweden data. These data sets contained information on upper secondary school records and parental occupation and education. Dryler concluded that although equal numbers of boys and girls participate in upper secondary school courses, gender differences in course selection continue to be strong. The "same-sector" effect hypothesis – that children are more likely to choose similar educational and occupational fields as their parents – was strongly supported. However, this effect was strongest for the father-son relationship than for the mother-son relationship, "while among girls the same-sector effect proved to be independent of parent's gender" (p. 394). Also, social class differences were evident. Those parents with higher levels of education and those who worked in the service class were more likely than less educated working class parents to encourage gender-atypical fields of study for both their daughters and sons. Dryler concludes that "since the result holds both for boys and girls this suggests that the social-origin effect stems more from 'higher-class' parents' egalitarian views and behaviours, than from their economic interests" (p. 394).

3. Participants in Higher Education

3.1 University Undergraduate Enrolment and Completion by Young Women and Men

Since the 1960s, increased participation by Canadian women in institutions of post-secondary education has been phenomenal. Between 1960 and 1985, enrolments by women increased steadily, and by 1988, women's enrolment had surpassed men's. Until recently, part-time enrolment of women had also increased dramatically. By 1997-98, more women were enrolled in both full-time and part-time undergraduate university programs than men (see Figure 1) (Statistics Canada, 1975, 1984-2000). However, when full and part-time enrolments in undergraduate programs are examined by field of study, quite a different picture emerges.[3]

Figure 1. Full and Part-Time University Undergraduate Enrolment, 1920-1998, Canada



Source: Statistics Canada, Cat. 81-229-XPB, Cat. 81-568

[3] Statistics Canada does not provide a detailed breakdown of post-secondary participation by age. Since university participants are more likely than community college students to be members of younger age cohorts (*e.g.*, 33% of the 18-21 age group in 1999 are enrolled in undergraduate programs, compared to 17% of the 18-21 age group who are enrolled in community college programs [Statistics Canada, 1999]) and because the focus of this paper is on the transition experiences of young women, only data on university participation and completion are considered.

For women, the increase in full-time undergraduate enrolments is primarily due to increases in enrolments in the social sciences (Figure 2) together with slight increases in education, the humanities, health sciences, and agricultural and biological sciences. In contrast, undergraduate enrolments by women in engineering and applied sciences, mathematics and physical sciences, and fine arts have remained remarkably static over the last 15 years. As portrayed in Figure 3, patterns of undergraduate enrolment by men over time are somewhat different. Enrolment in the social sciences climbed until 1991-1992, then declined slightly. While enrolment in engineering, the health professions and fine arts remained stable, enrolment in the humanities and education increased slightly, then levelled off in 1993-1994. Enrolments in mathematics and physical sciences declined between 1984-85 to 1989-90, then gradually increased over the next eight years. Both women and men attending university are most likely to be enrolled in the social sciences. However, whereas engineering and applied sciences and mathematical and physical sciences have been the next most popular choices for men, these fields continue to enrol the smallest proportion of women.

Figure 2. Full-Time University Undergraduate Enrolment by Field of Study, 1984-1998, Canada, Females

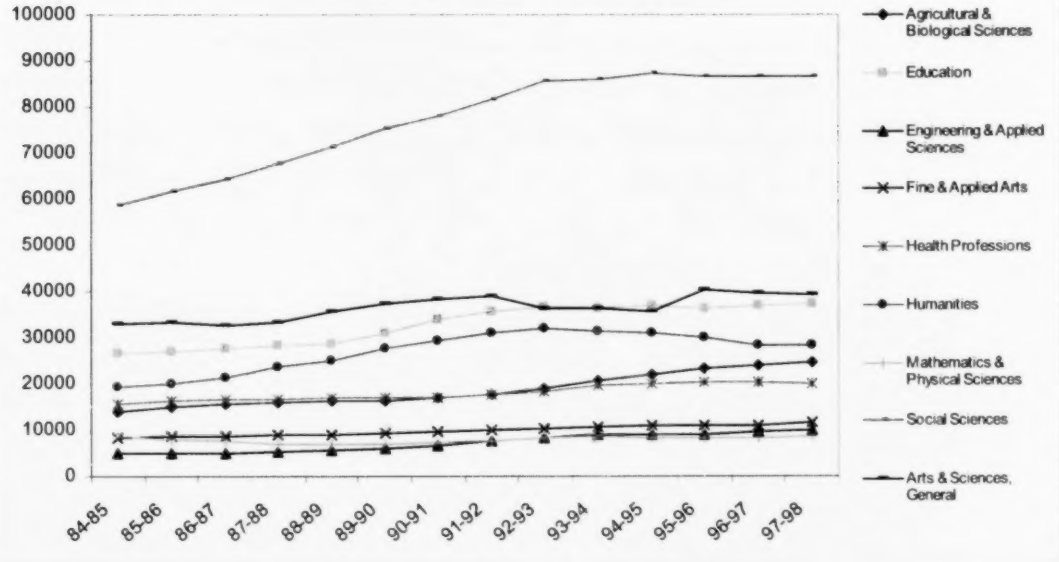
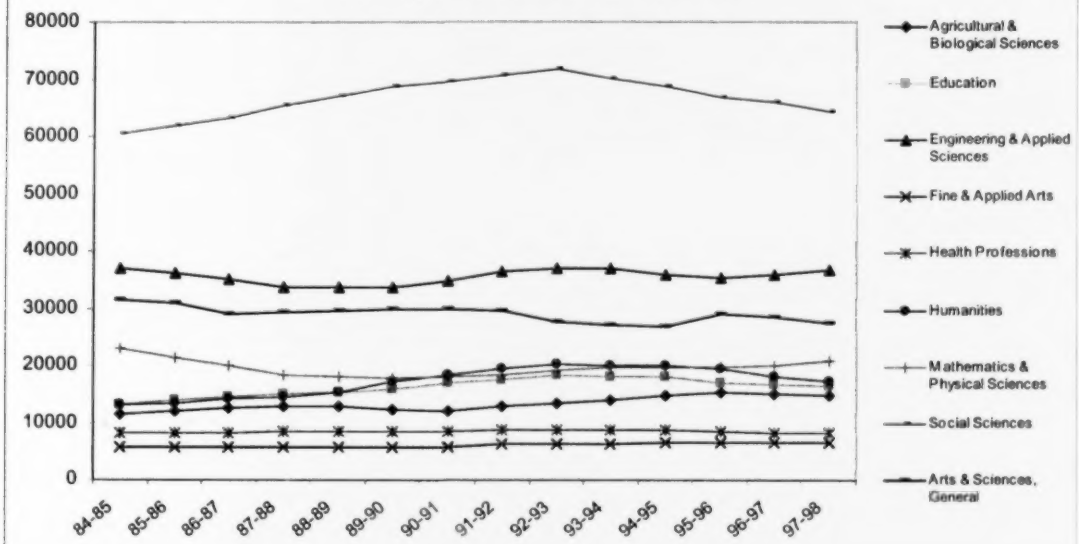


Figure 3. Full-Time University Undergraduate Enrolment by Field of Study, 1984-1998, Canada, Males



Part-time undergraduate participation in universities has expanded considerably over the past decades (see Figure 1). However, since 1993-94 enrolments have declined. By 1997-98, part-time enrolment by both women and men in undergraduate programs had dropped to 1980s levels. Figures 4 and 5 reveal that the fields in which women are traditionally enrolled experienced considerable declines. The largest, but less pronounced, decrease in part-time enrolments by men occurred in the social sciences and general arts and sciences. Very little research has been carried out on part-time students and no recent research has been conducted to explain declining enrolments. Also, because available Statistics Canada data are not disaggregated by age, it is not possible to determine changes in enrolments by younger and older women. One study of young adults in British Columbia demonstrated that within five years of high school graduation few young women and men enrolled in part-time post-secondary studies (Andres, 1999).

Figure 4. Part-Time University Undergraduate Enrolment by Field of Study, 1984-1998, Canada, Females

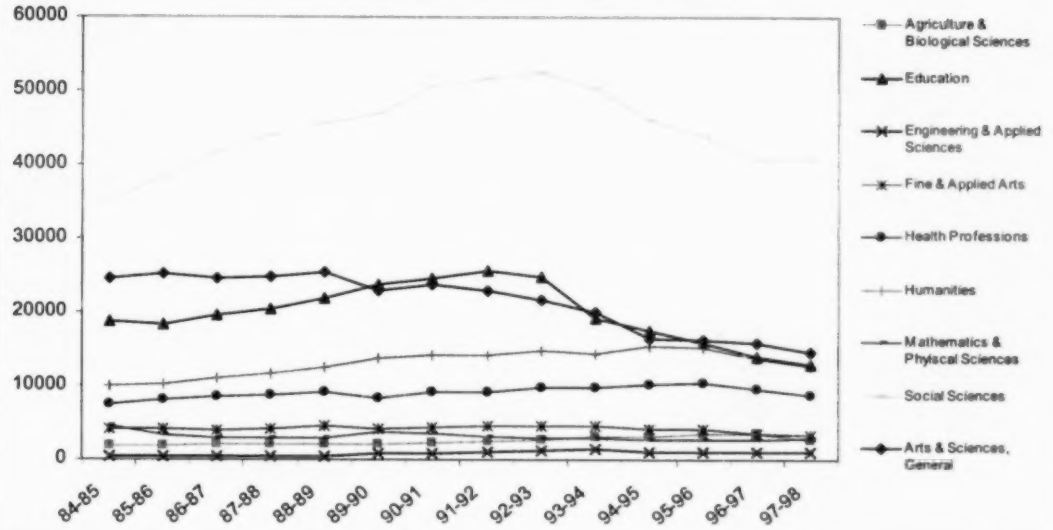
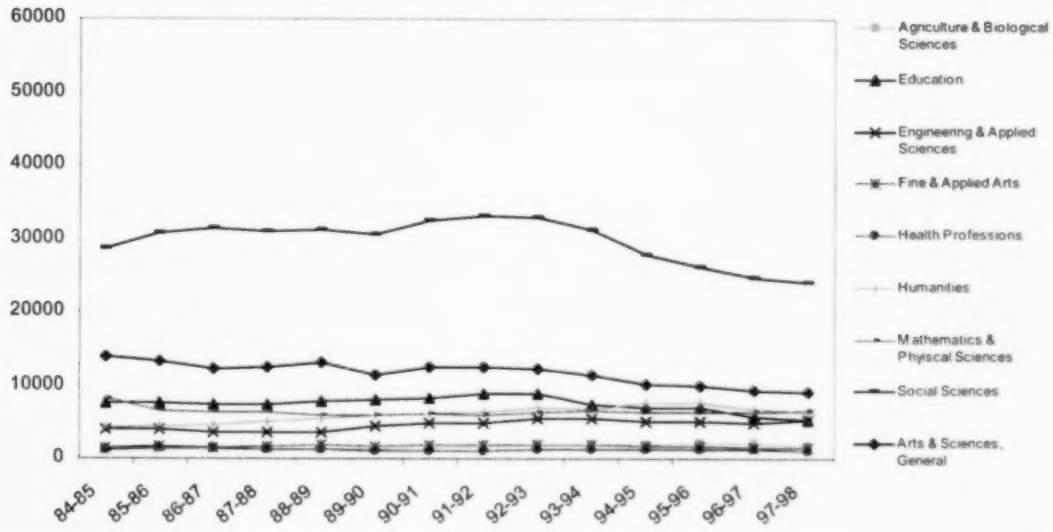


Figure 5. Part-Time University Undergraduate Enrolment by Field of Study, 1984-1998, Canada, Males



Figures 6 and 7 depict bachelor's and first degrees granted by field of study since 1984-85. According to Figure 6, in all fields except mathematics and physical sciences and fine arts, the number of degrees earned by women increased over time. The most dramatic increase was in the social sciences, followed by education, and the humanities. However, since 1994-95, a downward trend in enrolments in the humanities is apparent. Figure 6 demonstrates modest increases in degrees earned in the health sciences, agricultural and biological sciences, and to a lesser extent, engineering. For men, the social sciences also accounted for the largest gains in the overall number of bachelor and professional degrees earned (Figure 7). Degree completion in engineering and applied sciences, the health professions, and fine arts remained quite stable. However, although completion of degrees by men in education and the humanities increased slightly since 1984-85, those earning credentials in mathematical and physical sciences began to decline in 1986-87, levelled off in 1991-92 and remained stable through to 1997-1998.

Figure 6. Bachelor's and First Professional Degrees by Field of Study, 1984-1998, Canada, Females

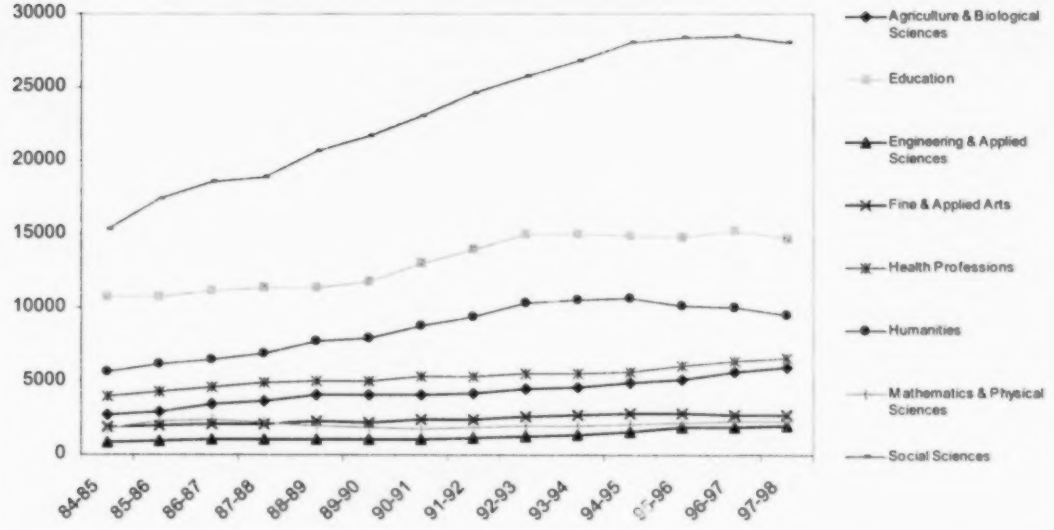
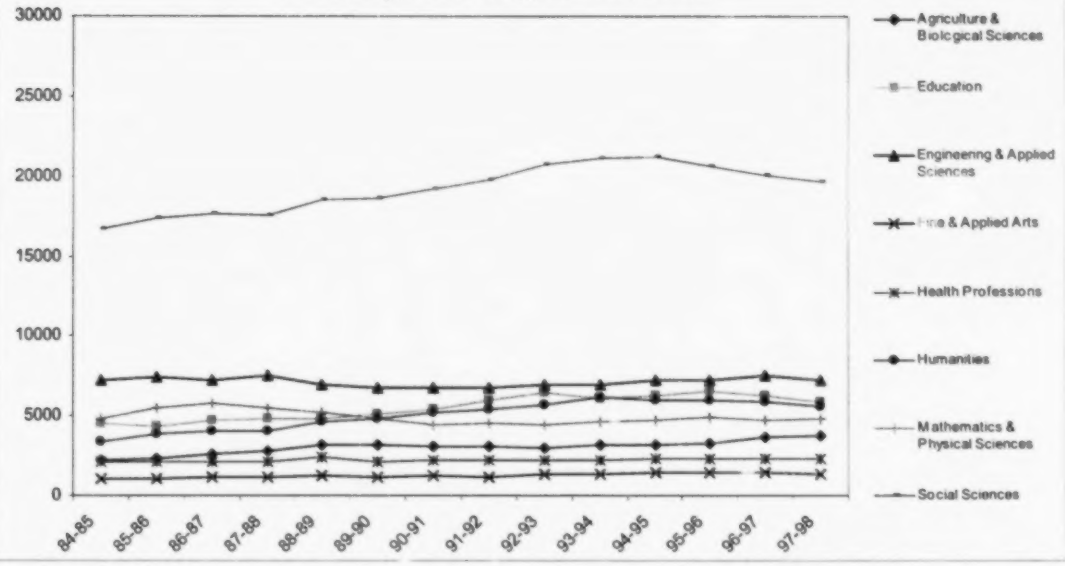


Figure 7. Bachelor's and First Professional Degrees Granted by Field of Study, 1984-1998, Canada, Males



Findings generated from analyses of Statistics Canada data concur with analyses of National Graduates Survey data on university graduates in 1982, 1986, and 1990. After demonstrating minimal shifts by women and men in degree completion by field of study across the three time periods, Finnie (2001a) speculates whether such minimal shifts are a result of demand-side stability driven by preferences of university students, or supply-side rigidity controlled by the number of university places in given fields.

Clark (2001) employed the university degrees granted index to determine shifts in the extent to which women are concentrated in female-dominated, gender-neutral and male-dominated fields of university study. He concluded that between 1981 and 1998, the proportion of women participating in all three categories, including the female-dominated category, has increased. He concludes that, despite increases in participation by women in male-dominated and gender-neutral fields of study, increased enrolments in female-dominated fields "accentuates the imbalance in those fields" (p. 7).

Betz (1992) identifies three factors that she claims serve to discourage young women from pursuing and succeeding at non-traditional studies. First, the "'null environment,' neither encourages nor discourages individuals – it simply ignores them" (p. 86). Second, within

institutions of higher education, the "stag effect" – behaviours that men adopt to protect their environment against the incursion of women – further serves to alienate young women in academia. Third, it is not uncommon for women to experience "putdowns" such as their seriousness toward their studies being questioned when they engage in a relationship, get married, or become pregnant. According to Williams (1990), despite ongoing concerns about "chilly climate" issues at Canadian post-secondary institutions, very little research has been carried out to determine the nature and extent of discriminatory classroom practices. She concludes that more research is required, including studies examining the relationship between teacher behaviours and classroom interactions, studies focussing on the influence of women professors on women's persistence and success with higher education settings, and studies documenting the experiences of women in non-traditional fields.

Plotting university enrolment and degree completion patterns by women and men and employing indices to measure shifts over time highlight gender differences by field of study. However, these analyses do not allow for an examination of other factors affecting university participation. Several studies confirm that the intersection of gender, social class, race/ethnicity and geographic location, together with the structure of educational systems in each province, affect whether and where one attends post-secondary institutions. In an earlier but important study, Guppy (1984) analysed 50 years of data (from the 1920s to the 1970s) from the Canadian Mobility Study to reveal that an overall reduction of the influences of gender, language group (English or French), and socio-economic background on post-secondary participation over time had indeed occurred. However, although women were more likely to participate in post-secondary education at every time period, disparities in university degree attainment persisted over time. Guppy and Pendakur (1989) examined whether factors affecting access also influence the types (community college vs. university) of institutions attended and the nature (part-time vs. full-time study) of attendance. Using 1974-75 and 1983-84 national survey data of post-secondary students, they demonstrated that more women and students from less educated families study part-time. Over time, although gender differences in university compared with community college differences disappeared, university participation by women from more educated families surpassed participation by men. In addition, parental education had a modest effect on program of study. They concluded that more women participated in post-secondary education in 1983/84. Female participants were more likely than males to have parents with higher levels of educational attainment.

Despite the emphasis in Canada on ethnic diversity and given that educational systems are controlled by individual provinces, only a few recent studies focus on the relationship of geographic location on the transition experiences of Canadian youth. Looker (1997) analyzed longitudinal survey data (N=1034) of Hamilton, Halifax and rural Nova Scotia. She found that both gender and sample area influenced respondents' educational plans and attainments. In 1989, girls were more likely to have higher aspirations than boys; however, because fewer girls attended university, by 1994 gender differences disappeared. Significant differences in expectations and post-secondary attainments by sample area were revealed. That is, more youth in Halifax than Hamilton or rural Nova Scotia expected to attend university and completed university degrees. Similarly, Andres and Looker (2001) employed data from two longitudinal surveys of Canadian youth to examine the effects of rural versus urban/rural and metropolitan residence on educational expectations and attainments of young women and men from British Columbia and Nova Scotia. They demonstrated that even after parental background, gender, and academic stream were controlled, students in rural areas in both BC and NS had lower expectations and attainments. Also, by measuring expectations and educational attainments four or five years following high school graduation, they revealed that the effects of rurality persisted over time. They concluded that a separate "geographic location" effect compounded cultural reproductive forces for both women and men.

In an examination of the educational activity of high school graduates in Edmonton and Vancouver over a five-year period, Andres and Krahn (1999) focussed on the relationship between provincial educational structures and post-secondary participation and completion. They found that although youth from both cities had access to a range of institutional choices and a variety of transfer options in "articulated" post-secondary systems, large class and gender differences in participation and completion continue to be observed. The results revealed that high school academic program was also a strong predictor of post-secondary participation and completion, demonstrating that even in systems explicitly designed to improve access to and encourage completion of post-secondary programs, social class advantages appear to be passed from one generation to the next. Young women and men were equally likely to participate in the post-secondary system. However, women continued to make different types of educational choices and were more inclined than men to enrol in and graduate from community college programs.

The post-secondary experiences of Canadian young women can be further understood by placing them in an international context. By employing data from the International Adult Literacy Survey (IALS), de Broucker & Underwood (1998) explored post-secondary attainment and educational mobility patterns of young women and men in 11 countries. They demonstrated that in countries such as Canada and the United States that do not have vocationally oriented secondary school systems, students were more likely to attend post-secondary institutions and earn post-secondary credentials. In only three countries – Canada, Poland, and Sweden – did higher proportions of women than men participate in post-secondary studies. Switzerland had the worst record of post secondary participation by women with only 12% of women compared to 28% of men participating in some form of post-secondary education.

Attempting to examine the influence of intergenerational patterns of educational participation, de Broucker & Underwood revealed that the strongest correlations were between the level of education of the respondents and that of the parent with the highest level of education. Results did not differ by age or sex of the respondent. Compared to other countries, the influence of parental education on their children's educational attainment in Canada was average. Furthermore, the odds of attaining a post-secondary credential for children with parents with some post-secondary education in Canada was 2.4 (with odds ranging from a low of 2.0 in Australia to a high of 5.8 in Poland). However, they conclude that the odds increase over time in countries with the lowest overall ratios; the opposite is the case for countries with higher ratios. In other words, in Canada, social class differences are increasing.

This study also examined the extent and magnitude of parental educational backgrounds on the educational outcomes of their children. Australia and Canada provided the most interesting comparisons. Although in both countries, equal proportions (48%) of respondents' parents had not completed secondary school, Canadian students from families with lower levels of education were less likely to earn post-secondary credentials than children from similar backgrounds in Australia. Canadian respondents with post-secondary-educated parents were tied with New Zealand for the lowest relative advantage of 1.55. Polish respondents with higher educated parents experienced the highest advantage. de Broucker & Underwood (1998) remark that

> this relationship may indicate that, as the proportion of individuals with post-secondary education increases, it is more likely to come from a wider, more diversified pool of parental educational backgrounds, reflecting more sharing of opportunities among individuals with various family educational backgrounds. Canada and the United States appear as the odd cases in this relationship: along with their substantially higher

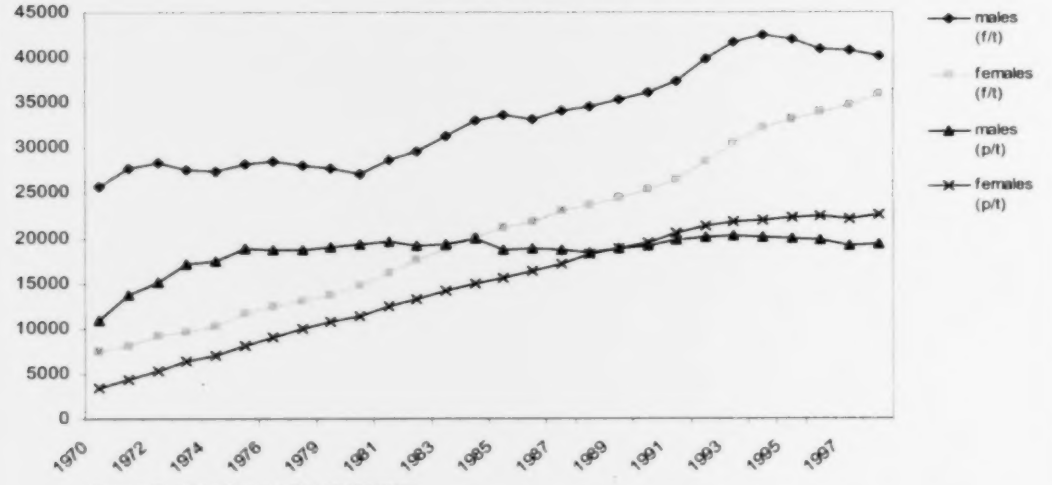
> proportion of post-secondary graduates in the population should be a significantly lower intergenerational gap. (p. 44)

Although the findings of this study are telling in terms of educational achievement and intergenerational mobility of Canadians, not all analyses were conducted by gender. As a result, post-secondary participation and completion rates by young women and men from different socio-economic origins may not be fully disclosed.

3.2 University Graduate Enrolment and Completion

Full-time university graduate enrolment by women and men has also risen at a steady rate. Since the early 1980s, whereas part-time graduate student enrolment by women has increased considerably, participation by men has been static (Figure 8). However, again when graduate enrolments are disaggregated into fields of study, a different picture emerges.

Figure 8. Full-Time and Part-Time Graduate Enrolments, 1970-1998, Canada



Source: Statistics Canada, Cat. 81-229-XPB

Full-time graduate enrolments in particular fields of study by men have increased very little since 1984-85 (Figure 10). The exceptions are graduate enrolments in the social sciences and engineering and applied sciences, which increased in the early 1990s, then declined. Men were most likely to be enrolled in graduate programs in the social sciences, health professions, engineering and applied sciences, and mathematics and physical sciences. Figure 9 indicates that women graduate students were most likely to be enrolled full-time in the social sciences, health professions, humanities, and education and their participation in these fields has increased

over time. Although few women pursue graduate studies in engineering and mathematics and physical sciences, slight increases in enrolments have occurred since the early 1990s.

Figure 9. Full-Time Graduate Enrolment by Field of Study, 1984-1998, Canada, Females

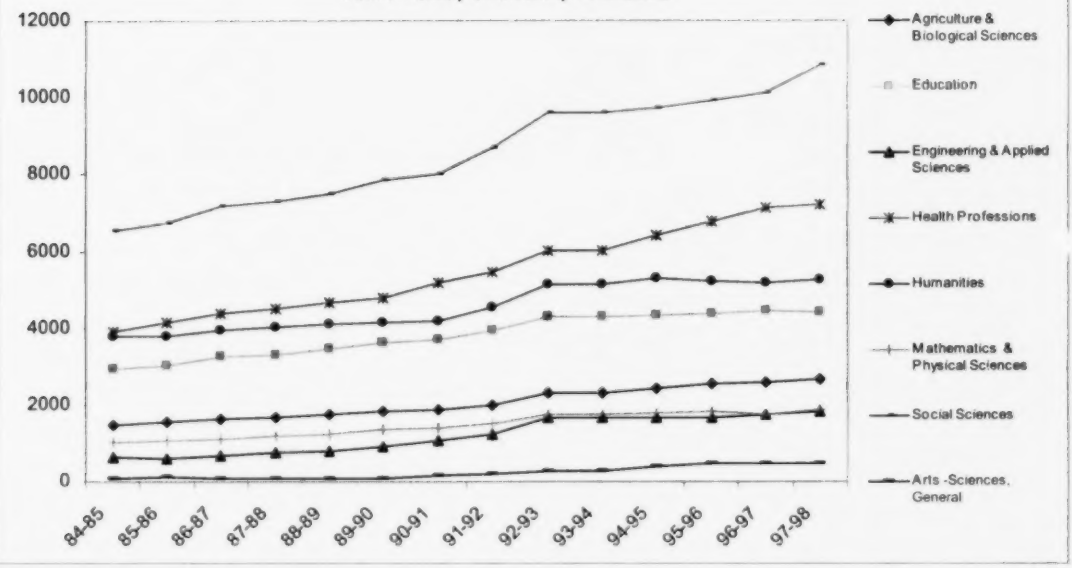
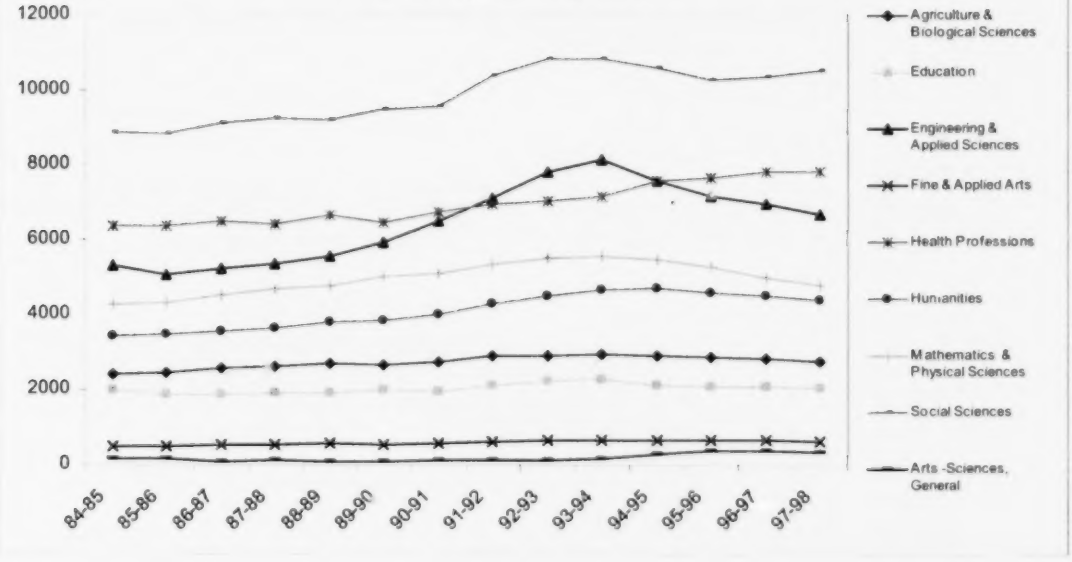


Figure 10. Full-Time Graduate Enrolment by Field of Study, 1984-1998, Canada, Males



Figures 11 and 12 portray part-time graduate enrolment patterns. Both men and women are most likely to engage in part-time graduate studies in education and the social sciences. However, while enrolment by women has increased over time, part-time graduate enrolment by men in these fields of study has remained static, or in the case of education, has declined. Few women or men participate in part-time studies in the health sciences, agricultural and biological sciences, or fine arts. However, men are much more likely than women to study engineering and applied sciences and mathematics and physical sciences part-time. Figures 11 and 12 raise several questions about access to graduate programs. To what extent is participation in part-time graduate programs possible? Is access to part-time graduate study more readily available in some disciplines than others? As Finnie (2001) noted, it is not clear whether enrolment patterns are the result of supply, demand, or both.

Figure 11. Part-Time Graduate Enrolment by Field of Study, 1984-1998, Canada, Females

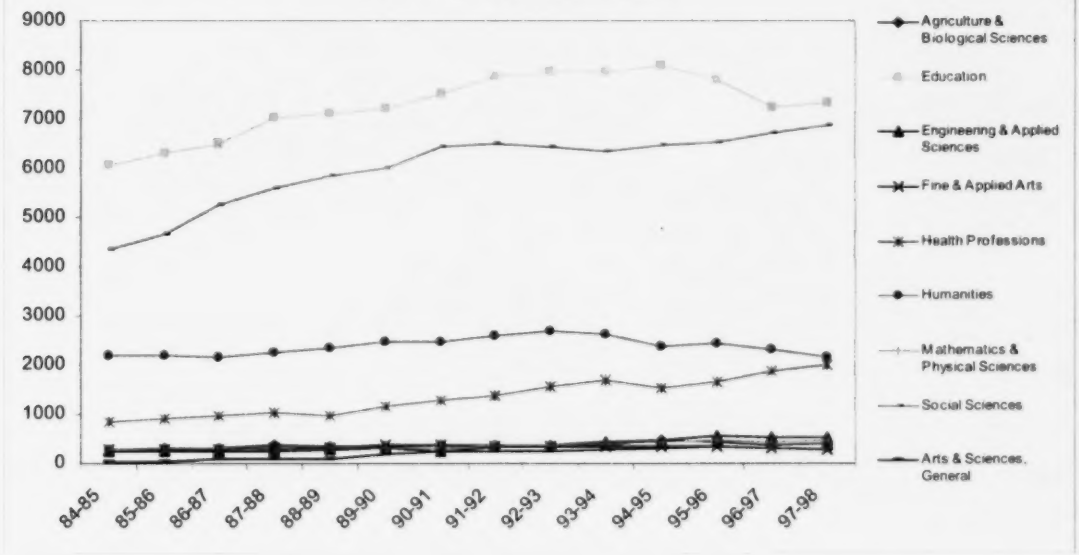
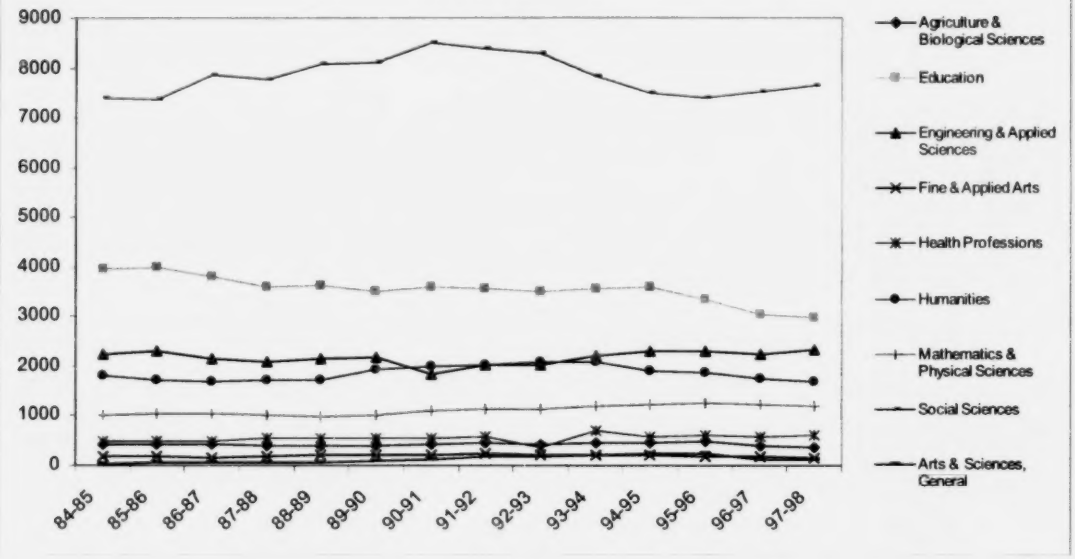


Figure 12. Part-Time Graduate Enrolment by Field of Study, 1984-1998, Males



Given enrolment patterns, it follows that women would most likely earn masters and doctoral degrees in the fields of social science and education. Figures 13 through 16 confirm this. Over the past 15 years, there has been an upward trend in the numbers of masters degrees granted to women in the social sciences, education, the humanities, and health professions.

Few women have earned masters degrees in agricultural and biological science, engineering and applied science, mathematics and physical science, and fine arts. Except for the social sciences, and to a much lesser extent engineering and applied sciences, the number of masters degrees earned has remained unchanged for men.

Figure 13. Earned Masters Degrees by Field of Study, 1984-1998, Canada, Females

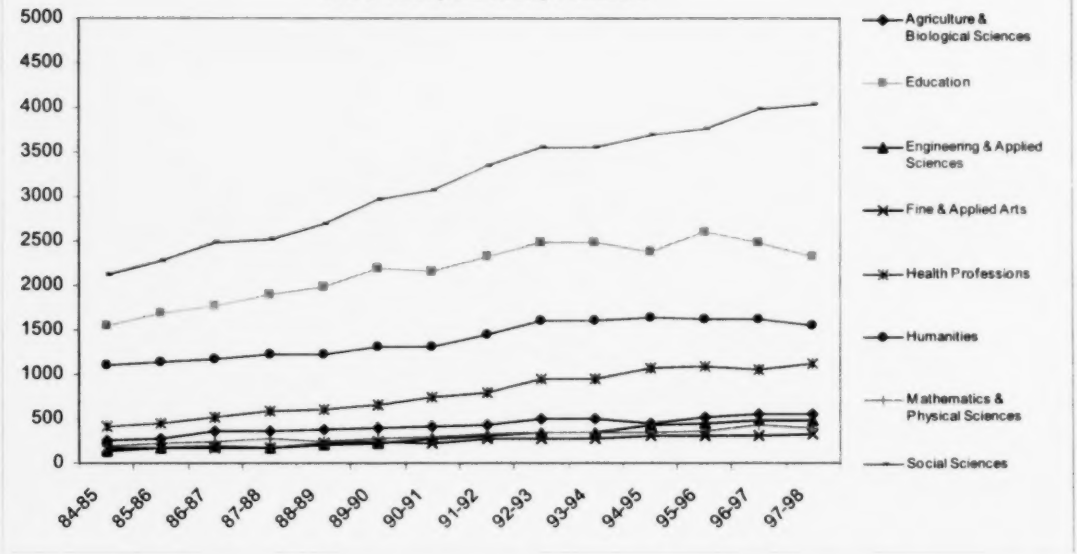
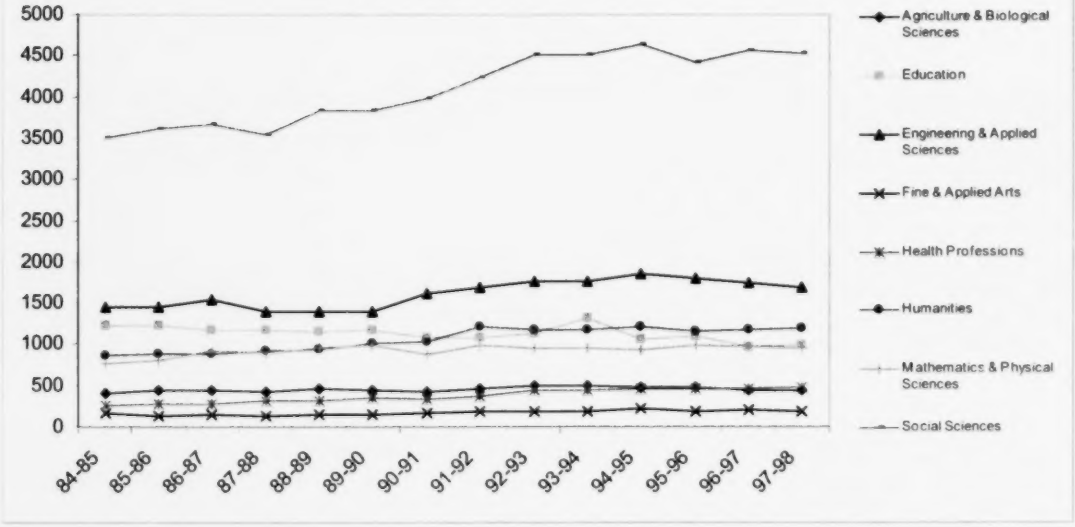


Figure 14. Earned Masters Degrees by Field of Study, 1984-1998, Canada, Males



Figures 15 and 16 demonstrate that, overall and in most fields, there has been an increase in the number of doctorates earned by both women and men since 1984-85. Men have experienced the largest gains in mathematics and physical sciences and engineering and applied sciences.

Although few women earn doctoral degrees in these fields, slight gains have been made over time. Women are most likely to complete doctoral studies in the fields of the social sciences, education, and the humanities. The trajectory for earned doctorates in education by men is rather flat.

Figure 15. Earned Doctorates by Field of Study, 1984-1998, Canada, Females

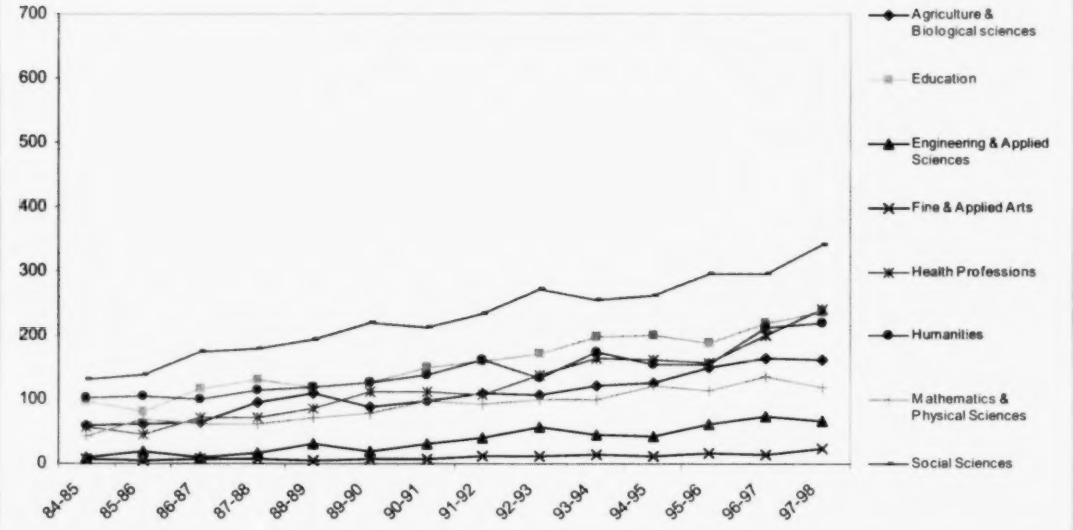
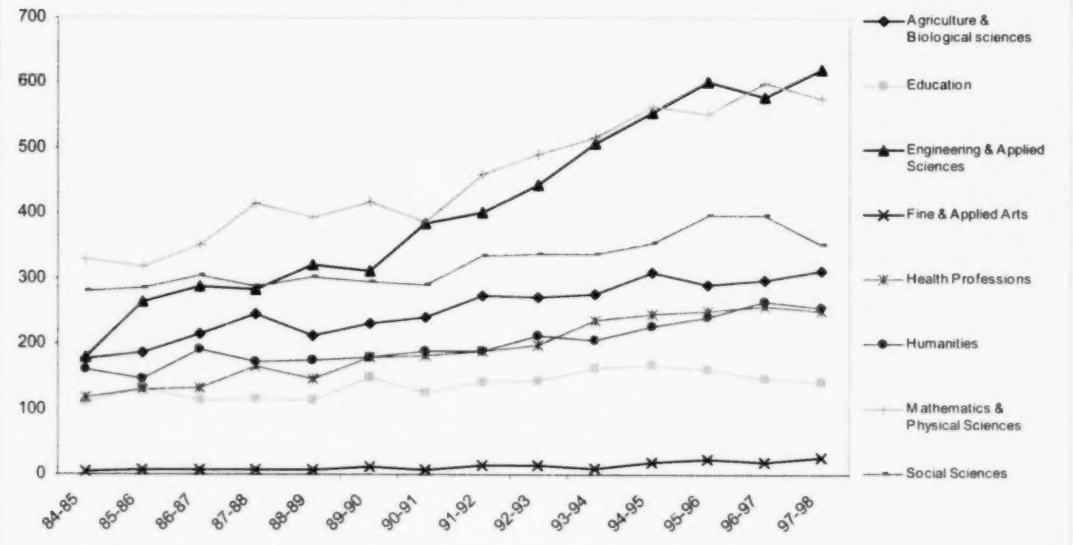


Figure 16. Earned Doctorates by Field of Study, 1984-1998, Canada, Males



By further disaggregating enrolments within fields of study, gender differences become more profound. Gadalla (2001) documented changes in enrolment patterns of Canadian women and men in undergraduate, masters, and doctoral mathematics, engineering, and computer science programs. Her analysis of Statistics Canada data from 1972 to 1995 demonstrate that little progress has been made to substantially increase enrolments by women in these program areas. Although the greatest increase occurred in engineering, as of 1995, women were one fifth as likely to study engineering at the undergraduate and masters levels and only one tenth as likely at the doctoral level.

4. Career Choices Made by Young Women

4.1 Conceptual Issues of Youth Transitions Between School and Work

Life course researchers – including those who focus on youth transitions – describe life paths as complex, non-linear, and fluid. Recent findings in the life course literature indicate that individual life trajectories have become destandardized (Kohli, 1986) disordered (Rindfuss, Swicegood, & Rosenfeld, 1987), individualized (Beck, 1992) and reversible (Hareven, 2000). There is an increasing recognition that "transition" is no longer a straightforward passage from one social institution to another and that the idea of a "normal biography" is not useful in explaining paths and transitions of complex lives (Heinz, 1991). In contrast, Hareven points out that although demographic and social changes since the 1980s have resulted in more complex life course transitions, "the normative and institutional ideal of a streamlined, uniform life course still prevails" (p. 314). Krüger and Baldus (1999) argue that when examined carefully, female biographies do not, and in the past, did not fit into phase models designed to explain a typical man's life. They indicate that when data on women's lives are collected and analysed using such models "it produces the *appearance* of a phased regularity which does *not* reflect [the] reality" (p. 362) of women's lives. In other words, women's lives have always been destandardized and disordered when compared with models meant to portray the orderly and sequenced lives of men.

For today's young women and men making the transition from school to work, a disordered life course may create problems in terms of opportunity structures and life chances. Furlong and Cartmel (1997) maintain that because today's young people believe they are in command of their own destinies by "choosing" from a multitude of paths and routes, increased options within societal institutions such as the post-secondary system and the labour force may result in increased opportunities for diversion away from one's goals by helping "to obscure the extent to which existing patterns of inequality are simply being reproduced in different ways" (p. 7). Rindfuss, Swicegood and Rosenfeld (1987) suggest that disorder in early life affects later life transitions and outcomes. In addition, participation in one or more life sphere at an earlier point in time influences outcomes in other life spheres at later points in time. As the paths through societal institutions become more diverse and decisions regarding these routes become more individualized, vigilant monitoring of the outcomes of paths taken – by social class, gender, and race/ethnicity – is essential.

Wyn & White (2000) agree with Furlong and Cartmel that researchers and policy makers also tend to portray young people primarily as active agents who are able to "consciously shape and choose their own destinies" (Wyn & White, 2000, p. 166). In doing so, the impact of social-structural forces is downplayed, the ability of young people to overcome adversity is instead reinforced. Wyn and White assert that contemporary research will best inform policy by focussing on the paradoxes experienced by youth. They suggest that to capture the realities facing today's young women and men, youth researchers should focus on the following questions:

- What are the social costs of the individualization of life experiences?
- How is social inequality patterned and by what mechanisms is it sustained?
- To what extent is the nature of the post-1970 generation a reflection of fundamental social changes in the constitutive basis of society itself? (Wyn & White, 2000, p. 180-181)

Based on evidence from their research in Australia (Wyn & White, 1997) (Dwyer & Wyn, 1998) and the findings from youth research in the Netherlands (du Bois-Reymond, 1998), Britain (Rudd & Evans, 1998) comparative work on Canadian and Australian youth (Looker & Dwyer, 1998) and research on European youth (Looker & Dwyer, 1998), Wyn & Dwyer (1999) conclude that the life course experiences of today's young people defy analyses that employ linear models of transitions to adulthood. Instead, models must allow for interconnectedness, negotiation, disruptions, and embrace individuals as agents within social and structural conditions (Andres, 1999; Wyn & White, 2000). Although their research does not focus specifically on gender, clearly differences between young women's and men's experiences are critical. In addition, models must account for the intersecting domains of gender and social class in relation to social and economic structures which push back the actions of individuals as agents (Bourdieu, 1984; McCall, 1992). For example, when examining the lives of women, dimensions such as childbearing in relation to post-secondary studies, part- and full-time work and the challenges of lone parenting in relation to education and work should be featured clearly in conceptual and analytical models.

4.2 Career Expectations in Childhood and Adolescence

> One concern that seems to be resistant to satisfactory explanation concerns girls and career specifically, that females are under-represented in higher status, higher earning occupations. (Curry, Trew, Turner, & Hunter, 1994, p. 139)

As with educational aspirations and expectations, it has long been acknowledged that gender differences in occupational expectations appear at a very young age (Marini & Brinton, 1984; Reskin, 1993; Riley, 1981). Over the life course, early differences in occupational expectations of young girls and boys interact with social forces and structural constraints, resulting in differential occupational outcomes (Furlong & Cartmel, 1997; Rindfuss et al., 1999; Wyn & Dwyer, 1999; Wyn & White, 2000). Feminist researchers have pointed out that whereas boys learn and internalize early in their lives that paid work will be central to their adult lives, girls receive messages that are conflicting and therefore confusing. For young girls, work is portrayed as one of many roles they will undertake as adults (Farmer, 1992; Hollinger, 1992; Hughes-Bond, 1998). Gender stereotyping is reinforced with the school system where girls have traditionally participated in female appropriate courses (Gaskell, 1992).

Hughes-Bond (1998) points out that although the majority of adolescent and adult Canadian women participate in paid employment, the majority in both age groups also work in gender-segregated jobs. Despite increasing levels of education by Canadian women, their participation in gender-segregated work is more likely to result in lower levels of remuneration and part-time work. She notes that this trend is also evident world wide (Organization for Economic Cooperation and Development, 1996a; 1996b). In order to gain insights into the perceptic s of young women about work and their current and future participation in the workforce, Hughes-Bond conducted open-ended interviews and focus group sessions with 12 adolescent Canadian girls from one secondary school.

Hughes-Bond (1998) concluded that although all of the young women interviewed believed that they would participate in some form of paid work, their expressed plans "remain, for the most part, vague and abstract. Although they are articulate in expressing the desire to combine home and career duties, they do not appear to have a clear picture as to how this will take place" (Hughes-Bond, 1998, p. 292). On one hand, they described the workplace as one that would

foster their individuality, provide stability and security, and would afford them responsibility and power. On the other hand, they wanted work that would permit flexibility and allow them to combine family responsibilities with work. Above all, they wanted to "maintain and nurture relationships" (Hughes-Bond, 1998, p. 289). Only one student had a clear sense of the need to plan for the future through careful selection of coursework in high school. All of the interviewees claimed that regardless of their career status, they would be ultimately responsible for childcare; only two young women considered childcare a joint responsibility of both parents. These findings concur with a larger survey research project conducted by the Canadian Teachers' Federation (1990) of 961 adolescent girls (Sayer, 1992).

In an examination of career choices by 520 girls and boys age 16 to 17 years who were enrolled in advanced secondary level (sixth form) courses in grammar schools in Northern Ireland, Curry, Trew, Turner & Hunter (1994) employed a conceptual model composed of three parts: first, they employed some elements of the model proposed by Dick and Rallis (1991) including students' aptitudes, socializers, cultural milieu, and past experiences to explore high school subjects chosen by students. However, asserting that this model relies primarily on the past and present experiences of students, Curry *et al.* added the concept of possible selves advanced by Markus and Nurius (1986) and Oyserman and Markus (1990) to examine how perceptions of career possibilities are related to motivation. Finally, "careerist," "adaptive," and "home-centered" work orientations as proposed by Hakim (1991) were included in the framework. Study participants were considered careerists if they envisioned working full-time for most of their married lives. Adaptives were defined as those who indicated that they would work full-time and part-time over their careers. Home-centred were those who indicated they would not work more than a few years or mostly part-time.

Findings revealed that only 54% of girls (compared to 86% of boys) were careerist in their work orientation. Girls were more than twice as likely to be adaptive than boys, and 16% of girls compared to only 2% of boys were home-centred. Careerists were also more likely to be enrolled in science courses, reported higher levels of confidence about their ability to achieve academically, and were more likely to aspire to higher education. However, no significant differences were detected between careerist and non-careerist girls in achievement in A-level subjects. Compared to noncareerist girls, careerist oriented girls and boys spent less time

thinking about when to marry and start a family, confirming that images of "probable selves" appeared to develop early. Careerists tended to be from homes with a mother who worked full-time, whereas noncareerists' mothers were more likely to be homemakers. Curry et al. (1994) conclude that findings based on the dimensions included in their conceptual model suggest that career orientations can be detected early in the lives of individuals. They were surprised by the finding that some academically oriented girls held certain home-centered attitudes.

Farmer (1992) signals the need for educational and career counselling of young girls and boys and offers concrete suggestions. She argues that young girls must be encouraged early to begin planning for careers and such planning should recognize the need to synchronize the dual roles of family and career. She cites Super's "Career-Life Rainbow" (Super, 1980) as a way to teach young people about long-range planning. In particular, Farmer claims that young people need to learn about multiple life roles and different time clocks over the life course. Rather than trying to influence career aspirations, young women need to learn to establish career commitments. The difference she points out, is teaching young girls how to get to the moon, rather than teaching them to want to get there. McLaren (1996) agrees. Based on findings of interviews with high school students, she concluded that although young women used multiple forms of competing discourses and "inventive strategies" when considering future work and mothering prospects, the reality of waged labour based on "a masculine, non-caring model of the worker" (p. 294) remained to be problematized. McLaren asserts "it is a cruel irony that educational and occupational reforms . . . encourage girls and women to aspire to 'unfettered' careers" (p. 295) without incorporating into educational discourses the contradictory labour market and family contexts in which young adult women find themselves.

4.3 Educational Expectations and Occupational Outcomes

Two recent studies employed longitudinal data to examine changes in occupational expectations between adolescence and adulthood. Rindfuss, Cooksey & Sutterlin (1999) used the National Longitudinal Study of the High School Class of 1972 to document changes in occupational expectations and the relationship between expectations of American students in their senior year of high school and subsequent occupational attainment at age 30. They argued that human capital theory provided a legitimate basis to explore gender differences in occupational

attainment and earnings. Although they acknowledge that human capital theory has been the subject of considerable controversy, they maintain that

> the fundamental argument is that men and women differ in their occupational plans, which in turn are conditioned by their child-rearing plans . . . .Women anticipate time spent out of the labor force to rear children, and they make educational and occupational choices accordingly (Rindfuss et al., 1999, p. 223).

These rational predictions regarding their lives lead women to choose educational programs that will permit relative ease of re-entry into the labour market with a minimum of upgrading. Men, however, focus on careers that will facilitate their ability to provide financial support, but not caregiving support. By comparing occupational expectations at four points in time (to age 30) with expectations reported in high school, less than 25% of women and men from all racial categories reported holding the same occupational expectation for all four points. Only two variables – type of high school program and high school grades – were useful in explaining differences. That is, those with higher grades and in academic (vs. general) programs showed more consistency in expectations over time. When occupational expectations held in 1979 are compared with actual occupational attainment 5 years later (at age 30),[4] less than half of any group held the occupation that they had expected. Not surprisingly, white males were the most likely to experience a match between occupational expectations and attainment. An examination of actual occupations revealed that whereas men tended to experience upward occupational mobility, women were more likely to find themselves in either lower occupational categories or out of the labour force. Again, a positive relationship between high school program and grades was demonstrated. Finally, by examining the impact of marital or parental status on occupational expectations and attainment, Rindfuss, Cooksey and Sutterlin concluded that married women with children experienced much more conflict than men with work and family roles. The results of this study demonstrate that the relationship between occupational expectation in high school and subsequent occupational expectations and attainments are highly unstable and that women with children continue to fare poorly (in relation to men) in the paid work force.

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[4] The authors did not report the relationship between occupational expectations held by high school seniors and their subsequent occupational attainment at age 30. Based on the 5 year findings, it can be surmised that there is little relationship between the two.

In a Canadian study of occupational expectations, Andres, Anisef, Krahn, Looker and Thiessen (1999) employed five Canadian longitudinal data sets covering the period from 1973 to 1996 to examine changes in occupational aspirations and expectations by gender, class, and geographic location. Rather than assuming that human capital (and rational choice) theory provided an adequate conceptual basis, this study was informed by three theoretical perspectives. First, the authors argued that if an *economic rationality* perspective held, an awareness by youth that labour market opportunities had worsened in the latter part of the 1970s and in the 1980s would lead to declines in levels of occupational aspirations and expectations. From a *late modernity* perspective, the constraints structuring occupational aspirations (*e.g.*, gender, social class, and living in rural areas) would have a diminishing impact as individuals increasingly took charge of their own life courses. Finally, support for the *social structuralist* perspective would be demonstrated by evidence if constraining factors such as class, gender, and urban-rural residence persisted.

Analyses of data from Alberta, Ontario, and Nova Scotia revealed a pattern of stable levels of occupational aspirations and expectations for men and a slight rise for women over time, hence refuting the economic rationality perspective. However, because persistent class differences in occupational aspirations and expectations were found across cohorts, the authors rejected late modernity explanations in favour of social structural theory. Analyses revealed that although occupational aspirations and expectations of male youth did increase significantly from 1973 to 1989, aspirations and expectations of female youth – including those of young women living in rural areas – did increase over time. These findings were troubling. As described in the next sections, although occupational aspirations and expectations of Canadian women had increased over time, labour market conditions for many women have not improved.

5. Patterns of Labour Market Attachment Relative to Marriage and Dependent Children Status

5.1 Conceptual and Measurement Issues Around Women, Marriage, Childbearing, and Work

Oppenheim Mason (1986) reminds us that studies of women and in particular, gender inequality "is empirically as well as conceptually a multidimensional phenomenon" (p. 287). She points out that although the "status of women" has been described as an elusive concept, several common elements are central in examining gender inequality, including prestige, power, and access or control over resources. However, supporting the claim by Whyte (1978) that a single status of women does not exist, she indicates that relative status or power in each of these domains must be considered concurrently and in relation to the life course stage of given groups of women. By focussing on gender and class stratification and differences between access and control over resources, both differences among women and between men and women in terms of power, prestige, and resources can be determined. Also, analyses of women within household units, rather than as individuals, may mask inequities within households (Oppenheim Mason, 1986; Townson, 2000). In addition, other researchers remark that the temptation to treat all women as one homogenous group is equally problematic (Long & Cox, 2000; Stout & Kipling, 1998). For example, in their report on Aboriginal women in Canada, (Stout & Kipling, 1998) emphasize that it is critical to consider "differences *among* Aboriginal women" (p. 3) as well as those between Aboriginal and non-Aboriginal women in Canada. Instead, the interrelationships of gender with class, race, and sexual orientation must be included to provide accurate depictions of women's (and men's) lives. Recent documents by the Status of Women (Status of Women Canada, 1998) and Federal-Provincial/Territorial Ministers Responsible for the Status of Women (1997) specify explicit criteria and appropriate indicators for gender-based analyses.

Oppenheim Mason also draws our attention to the way in which indicators of female status or gender inequality are measured. She asserts that current indicators provide measures with multiple meanings that may be difficult to interpret. She provides the example of the relationship between educational levels and fertility as problematic in terms of interpretation. German life course researchers Krüger and Baldus (1999) provide an example from their research on West

German women. They found that when women were asked to state their occupation their self-evaluations were "modest and self-effacing, in vivid contrast to the self-decoding strategies of German men" (p. 369). Whereas men provided the most socially attractive response available to them, responses by women did not reflect their highest qualifications or the most prestigious employment category that they had occupied. This qualitative dimension of Krüger & Baldus' study demonstrates that answers provided by women on standardized questionnaires about occupational status have "serious methodological consequences" (p. 369) as they are likely to result in misclassification.

Krüger and Baldus (1999) claim that our analytical methods mask, rather than illuminate, women's experiences in various life spheres. Numerous other unplanned and unforeseen interruptions which affect the "order" of the life course of women (including school entry by children, family illness, and parent care) are often not accounted for in studies of determinants of labour force participation and related gender differences, but instead are "hidden by aggregate empirical evidence" (Krüger & Baldus, 1999, p. 362). Furthermore, analytical techniques which treat interrelated variables as independent of each other also produce misleading results. A good example is provided in a study on wage inequality of female and male post-secondary graduates. According to Davies, Mosher and O'Grady (1996) "despite the persistence of a male-female pay disparity, gender was a weaker predictor of income in later cohorts. . . . the strongest predictors of income in all years were standard human-capital variables such as age, part-time work and degree type" (p. 132). Analytical techniques that allow gender to be reduced to non-significance fail to acknowledge the interrelated nature of the factors impacting on women's lives.

5.2 Women and the Workforce

According to Zukewich (2000) 55% of Canadian women over the age of 15, compared to 67% of men, were in the labour force in 1999. In 1999, 46% of the employed workforce was comprised of women. More young women aged 15-24 (52%) than young men (38%) worked part-time and 22% of women between the ages of 25 and 44, compared with only 5% of men in the same age group engaged in part-time employment in 1999. When asked why they worked part-time, the majority of women and men in the younger age group indicated that they were attending school. However, the most frequent reason provided by women aged 25 to 44 was child care

(Zukewich, 2000). The proportion of both young women and men (age 15-24) in temporary employment in 1999 was around 28%. In all other age categories, slightly more women than men were engaged in temporary work.

An examination of paid work ratios by household structure (Clark, 2001) indicates that gender differences in paid work in dual-earner families decreased from 0.70 in 1992 to 0.77 in 1998.[5] However, for primary-earners with young children, a decline in the index to 0.85 in 1998 from 0.91 in 1992 suggests an increased gender imbalance. Finally, the occupational return on the education index – an index examining "the gender imbalance in the return on investment on university education in terms of working in a high-level job" (Clark, 2001, p. 8) indicates that the gender gap has narrowed. In 1998, 49% of female compared with 62% of male university graduates were employed in high level jobs. The comparable figures in 1986 were 51% and 74%, respectively.

Hughes (1995) examined shifts in the degree to which women are employed in less traditional occupations. She reports that by 1991, almost 40% of Canadian women in the labour force had some type of post-secondary education and approximately 14% had attended a university. She argues that while gains in degree and diploma completion by women in non-traditional university and community college programs continued to be made, they were not reflected in the numbers of women employed in non-traditional occupations. Hughes defined a non-traditional occupation as follows:

> an occupation is considered non-traditional if women's representation in it during a particular year was below the proportion of women in the experienced labour force that same year (that is 34.3% in 1971, 42.8% in 1986, and 44.9% in 1991). (Hughes, 1995, p. 15)

By examining labour force participation patterns by women and men in 484 occupations, Hughes demonstrated that between 1971 and 1986 the number of occupations classified as highly non-traditional for women decreased from 292 to 250; however, between 1986 and 1991, only a small decline (from 250 to 243) occurred. Although the proportion of women employed in highly non-traditional fields grew, the growth was not sufficient to warrant a change in classification to either the intermediate or traditional category. Between 1986 and 1991 women's participation

[5] According to Clark (2001), "a ratio of 1.0 means women and men are equal. An index above or below 1.0 indicates inequality or imbalance for that measure: below 1.0, women have less than men; above 1.0, they have more"(p. 1).

increased in several non-traditional occupations including management, sales, and several of the professions. Minimal gains were made in the highly non-traditional areas of management in the natural sciences and engineering, supervision in architecture and engineering, architecture, and farming.

Overall, the proportion of women employed in traditionally female occupations did decline. The largest decrease occurred between 1971 and 1986 (from 86% to 79%). By 1991, this proportion further declined by only one additional point, resulting in "over three-quarters of female workers (78%) still concentrated in over one-quarter (132 out of 484) of all occupations" (Hughes, 1995, p. 17).

Also, Hughes (1995) noted that women in highly non-traditional occupations were likely to be somewhat older and to have earned university credentials. However, in occupations that had experienced the most rapid change away from traditional status, more women than men tended to be younger (41% versus 27%). In addition, for the most part, women in these "fast changing non-traditional occupations" were considerably more likely than women workers in general to be employed full-year and full-time and to receive higher median salaries. Although women in non-traditional occupations only earned an average of 80% of men's incomes (who were employed in the same areas), they fared better than women employed in all occupations combined. The median income for the latter is 70% of men's mean income in combined occupations.

Hughes's study suggests that some progress has been made in reducing the number of highly non-traditional occupations for women. However, Gold (1994) cautions that even though the number of women in non-traditional occupations is increasing, women continue to encounter other barriers to full participation. She cites the exclusion of women from decision- and policy-making processes as one example of exclusionary practices.

In an analysis of U.S. Census data from 1960 to 1990, Jacobsen (1994) set out to answer the question "How segregated is the U.S. labour force?" By using the Duncan index of occupational segregation and defining "complete integration . . . as a situation in which the proportions of each type of worker in an occupation, relative to each type's total number in the work force, are equal for all occupations" (p. 205), she found that between 1960 and 1990 the proportion of

either women or men who would need to change their occupations to "drive the index down to zero" dropped 9% (from 64% in 1960 to 55% in 1990). There were similar declines by white workers over the same time period, however, the index for non-white workers remained static between 1980 and 1990. Detailed analyses by sex and race demonstrated that between 1980 and 1990 gender segregation had declined for women and non-white men and women, but race segregation for men rose. Jacobsen concluded that broad Census occupational classifications obscure persistent occupational segregation patterns that are revealed through analyses of subgroups. However, because she does not include age as a subgroup, this study does not demonstrate segregation patterns for young women and men.

The nature of work undertaken by women and men is also important. According to de Wolff (2000) despite the perception that most of the growth in the labour market is within the field of technology, in reality the major increases in employment since 1990 are in the areas of temporary work, low wage contract work, or low-wage self employment. Furthermore, women are more likely than men to be employed in these types of work. de Wolff claims that the new "flexible" labour force has had a dramatic impact on the wellbeing of workers – and particularly women – including less stable employment and more difficulty in qualifying for benefits such as Employment Insurance. In a participatory research study of 205 female non-permanent workers, de Wolff reports that 70% of the women reported earning a maximum of $18,000 a year and that 40% were the sole income earners of their households. However, women reported that the demands by employers further dwindled their meagre incomes by downloading employment related costs. Such costs included providing and maintaining one's own equipment and becoming responsible for benefits such as maternity leave and holidays. Also, they were required to live with more ambiguity in relation to work hours which led to difficulties in juggling family demands with work demands. Townson (2000) adds that the nature of jobs available to women, together with limited availability of day care and increased demands as family caregivers may result in increased rates of women living in poverty in the future. She asserts that studies of women and employment should look at how women's financial security may be undermined because they must combine paid work with unpaid obligations of family life.

5.3 Patterns of Leaving and Returning Home

According to Boyd and Norris (1999) Canadian Census data reveal that unlike the 1970s where the incidence of young people living with their parents declined, since the early 1980s the number of young adults living at home has increased. They report that the proportion of young women between the ages of 20 and 34 who lived at home increased from 16% in 1981 to 23% in 1996; comparable figures for young men in this age group were 26% in 1981 and 33% in 1996. In 1996, almost half of young unmarried women and more than half of young men lived at home. Boyd and Norris suggest that there are several explanations for the increasing number of young people living at home, including economic downturns, increased participation in post-secondary education and correlated increasing dependence on one's parents, and declining marriage rates. Several U.S. studies have demonstrated similar patterns of leaving (or not leaving) home by young adults and reach similar conclusions to explain nest-returning patterns (Aquilino, 1991; Ward & Spitze, 1996) However, as Ward and Spitze (1996) point out, co-residence typically appears to be a way for the needs of adult children to be met, rather than for the adult child to provide caregiving to parents. Like the Boyd and Norris study, Ward and Spitze found that sons are more likely to delay leaving the parental home and are more likely to return. However, they report that "coresidence is more stable for daughters (Ward & Spitze, 1996) suggesting that they have greater need for assistance or have more satisfying coresidence experiences" (Ward & Spitze, 1996, p. 718).

In a longitudinal study of British Columbia youth, Andres (Andres, 2001) found that 59% of women and 57% of men reported returning to the parental home to live within 10 years of high school graduation in 1988. They were most likely to return home for financial reasons (*e.g.*, wanting to save money) or during periods of summer employment or between terms while attending post-secondary institutions. By 1998, 10% of women and 17% of men reported that they were still living at home. The most frequent reasons for continuing to live at home were all financial in nature.

5.4 Returning to Work After Childbearing

The overall increase in women's participation in the labour force is largely a result of increasing numbers of women returning to work after having had children. Data from the Labour Force Survey and the Survey of Labour and Income Dynamics reveal that within one month after

giving birth in 1993 or 1994, 21% of women had returned to work. Within one year, this proportion had increased to 83% and within two years 93% of women were back in the work force (Zukewich, 2000). Women without maternity benefits or who were self-employed were much more likely than women with benefits to return to work within one month of giving birth.

According to Barrow (1999) between 1970 and 1996 in the U.S., labour force participation by women increased from 43% to 59%; however, the increase in the number of married women in the labour force with preschool children jumped from 30% to 63%. In Canada, the majority of both parents in two-parent families with children are employed outside the home and the proportion of both parents working part-time is increasing (Silver, 2000).

Acknowledging that women in the work force who decide to have children must take time off in one form or another (holidays, sick leave, or resigning) and that women who return to work more quickly after child birth are likely to experience low average earnings penalties, Barrow (1999) undertook a study to examine three economic determinants which could potentially influence a woman's decision to work shortly after giving birth. These factors included potential wage earnings available to the woman, other available family income, and the cost of child care. Barrow hypothesised that

> the probability that a woman returns to work is the probability that her wage net of child care costs exceeds her reservation wage. Thus, higher child care costs and lower wages will decrease the probability that a woman will go back to work. Assuming that leisure is a normal good, higher other family income will also decrease the probability of returning to work. . . . [also] the greater the taste for work the lower the net wage needed to exceed the reservation wage. (Barrow, 1999, p. 435)

Analyses of National Longitudinal Survey of Youth data (USA) with a restricted sample of women who (1) gave birth to their first child between 1979 and 1994, (2) worked in the year before birth, and (3) who lived with a spouse or partner, supported Barrow's hypotheses. That is, women's own wages, child care costs, and available family income influenced women's decisions to return to work after having their first child. Also, the educational level of the woman and a positive female role model (*e.g.*, a mother who is a professional) also contributed positively to this decision.

Similar conclusions were drawn by Powell (1997). Analyses of data on married mothers from the 1988 Canadian National Child Care Survey and the 1988 Labour Market Activity Survey led her to conclude that wages positively impacted women's decisions whether to return to work and the number of hours worked upon return. The cost of child care, however, had a negative impact on both of these decisions. She concludes that future research should move away from static models of labour force participation by women and instead employ longitudinal data and dynamic life-cycle models.

Intrigued by concurrent trends indicating that marriage rates of young women had declined (from 64.2% in 1970 to 34% in 1994) together with evidence that education levels and labour force participation have been increasing steadily and that female-headed families had increased from 10.7% in 1970 to 17.6% in 1995, Blau, Kahn, and Waldfogel (2000) examined the determinants of marriage rates among young women. They used U.S. Census data from 1970, 1980 and 1990 to examine the influence of labour market and marriage market conditions for young women and men between the ages of 16 and 24. They concluded that lower marriage rates for white women, regardless of educational level, were related to stronger female labour markets, weaker female marriage markets, and poorer male marriage markets. Marriage rates for black women were affected by higher adult male unemployment rates and lower adult male average wage rates. In addition, welfare benefits and marriage rates were negatively related. These findings led Blau, Kahn and Waldfogel to conclude education and labour market forces "will continue to inhibit marriage for white women with a high school degree or less education (who would traditionally marry men in the affected groups) and perhaps for less educated black women as well" (p. 646).

Silver (2000) employed data from the 1998 Canadian General Social Survey to determine the time parents, who are both employed full-time, spend with their children. Silver defined "time with children" as both childcare and other time spent in the child's presence and delimited the study to intact two-parent families. Mothers with young children reduced their number of hours of paid work which allowed them to spend more time with their children. However, mothers who were employed full-time and with a child under 5 years old spent almost three times more time with their child than did fathers (6.5 versus 2 or less hours). As children grew older, the gap narrowed and by the time that children were in their teens, the gap finally closed.

Mothers spent twice the time each day (than fathers) on personal care of young children, including feeding and dressing (91 minutes versus 47 minutes). As children aged, the time devoted to these activities decreased, but differences in the proportion of time spent by mothers and fathers increased. Fathers spent over an hour more each day than mothers on leisure activities for themselves and almost as much time as mothers on leisure activities with their preschool children. As Silver notes, however, fathers' leisure time spent with children "amounted to less than one-third of their available leisure time compared to almost half of mothers" (p. 26). She concludes that these findings confirm that gaps between mothers and fathers in time spent with children decreases as the children get older and mothers from dual-income families with young children continue to assume considerably more child-care activities.

Silver's findings concur with those of Clark (2001). Also using 1998 General Social Survey data, but employing indicators that were jointly developed by the Ministers Responsible for the Status of Women Canada and Statistics Canada, Clark determined that women aged 20 to 44 in dual-income families spent 72% more time on child-care than men in dual-income families. Comparable figures for women in primary-earner families was 27%.

5.5 Lone-Parent Families

As indicated earlier, data on women's lives are often presented to produce an appearance of a phased regularity and sequencing which distorts the reality of their life biographies. Often, "disordering" events, such as lone parent status, are overlooked when attempting to understand the transition of young women through the educational system to work.

Over the past several decades in Canada, the number of lone-parent families has increased dramatically. Moore (1987) reported that 13% of all Canadian families were headed by lone parents, and of lone parent families, 82% were headed by women. By 1996, lone parent families increased to 19%, with 83% headed by women (Almey, 2000). However, the characteristics of lone parents has changed over time. In 1981, 52% female lone-parents were separated or divorced, 33% were widowed, and 11% were single. By 1996, the proportion of single lone parents increased to 24%, those widowed decreased to 20% and separated or divorced lone-parent women remained relatively unchanged at 54%. Single lone-parent women are also likely to be older. While the proportion of single women aged 15-24 with children dropped from 38%

in 1981, to 26% in 1991, to 23% in 1996, those in the 25-34 and 35 to 44 age groups increased from 40% to 44% and 15% to 25%, respectively (Almey, 2000; Oderkirk & Lochhead, 1992).

Regardless of the age of their children, women lone parents were less likely than women from two-parent families to be employed (Zukewich, 2000). In 1999, the largest gap occurred between lone-parent women (38% employed) and women in two-parent families (63% employed) with the youngest child less than three years old. Labour Force Survey statistics also indicate that during the recession in the early 1990s, whereas employment by lone-parent women decreased, the opposite was the case for women in two-parent families. The impact of lone parent status on income earnings is discussed later in this paper.

5.6 Changing Family Dynamics

A demographic perspective provides a different way of viewing the roles young women face over their lifetimes. Using 100 years of Census data between 1860 and 1960, Gee (1990) illustrated that declining fertility and mortality levels have resulted in a shift in the amount of time an individual spends in the parent role and the child role. Over the 100 years since 1860, a combination of declining fertility rates and lower mortality rates of both parents and children has resulted in more of the Canadian population "occupying the role of 'child' . . . for a much longer period of our lives" (Gee, 1990, p. 192). Life table analyses reveal that

> the number of years that adult children and at least one of their parents are jointly alive shows a nearly three-fold increase, from 13 years for the 1860 cohort to 32 years for the 1960 cohort. This trend results in from both declines in mortality and decreases in the age difference between parents and children, the latter the result of the younger age at childbearing that is, or at least has been, associated with smaller family size. (Gee, 1990, p. 193)

As a result, because individuals are "children" to living parents for much longer periods of time, the length of time of parent-adult child involvement has increased. For example, Gee reports that, based on conservative estimates, about 25% of the 1960 cohort will have at least one living parent when they themselves have reached the age of 60. And because more recent cohorts have fewer children or no children, ageing parents will have fewer informal sources of support traditionally provided by (usually female) children. In addition, although the median age of first birth for women has remained rather stable at 25, the median age of last birth has decreased from

37 in 1860 to 27 in 1960. As a result, women in more recent cohorts will spend less time raising dependent children, but a longer period of "adult child-parent interdependency, the dynamics and characteristics of which will influence the nature and degree of caregiving and care-receiving, both before and after parents exhibit signs of frailty" (Gee, 1990, p. 194).

These demographic shifts have important implications for policy. Whereas the 1930 birth cohort will have the most informal support in terms of number of surviving children, the "family care-giving 'reserve'" for the 1960 cohort will be dramatically reduced. Gee warns that from a policy perspective, past and current family care-giving practices are not likely to be effective for younger cohorts. Instead, a shift in emphasis away from informal family support to formal governmental support of children who care for ageing parents is required. She asserts that

1) there is a need for assistance to children [and spouses of children] providing direct hands-on care to older parents, assistance in the form of respite care and adult daycare, for example.

2) a revision in the pension policy . . . . which would allow a 'drop out' provision (similar to the recently implemented child care drop out provision) so that children could remove themselves from the labour force for a certain period of time in order to help with parental care and not lose pension credits would be desirable.

3) tax deductions or family allowances for elder care is a possible policy avenue.(Gee, 1990, p. 197)

Also, Gee suggests that male as well as female children will increasingly need to adopt the role of care-giver for parents.

Long and Cox (2000) highlight the contradictions facing working women with children. Today, more women with children are required to work. However, the number of permanent, full-time, well-paying jobs has decreased. Although women bear the primary burden of child care and home care (as confirmed by Silver, 2000), at the work place, their role as mothers is likely to be undervalued. As Krüger and Baldus (1999) found in their study of West German women, women living in the dual contexts of work felt "small and worthless" rather than valuable and "doubly qualified" (p. 372). Because of the demands on their lives, Long and Cox argue that women are confronted with additional gender-based occupational stressors. They cite four intersecting sources of stress as documented by Smith (1993) including

(a) a hostile work environment (e.g., discrimination, sexual harassment),

(b) an unsupportive home (e.g., the 'double' shift of housework),

(c) a disapproving social environment (e.g., conflict of values, especially between employment and parenting), and

(d) the individual's own self-concept (e.g., conflict between 'real' and 'ought' selves, the 'super woman' syndrome). (Long & Cox, 2000, p. 110)

Hence, because women occupy multiple roles within multiple life spheres, the stress experienced by working women with children extends well beyond our current understanding. Long and Cox point out that research conducted under the rubric of "occupational stress" has not traditionally focussed on women. Although more recent studies have acknowledged gender differences, most of these research efforts have been carried out on white, professional women. In doing so "this latter approach oversimplifies women's lives and constructs gender as an individual attribute, rather than a product of the ongoing power relationships between men and women within a male-dominated social structure" (Long & Cox, 2000, p. 111). In contrast, very little research has been conducted on working-class or poor women to determine the multiple challenges, the extent to which they have access to resources, and the impact that governmental policies have on their lives. Also, race and sexual orientation should be taken into account when trying to understand the multidimensional contexts in which Canadian women are located.

6. Income Earnings of Young Women

6.1 Overview

> A major story of the 1990s, to which relatively little attention has been paid is the change in improvements in labour market outcomes for women. There have been significant improvements . . . . for women . . . and a deterioration for men. . . . [However], although there was only a marginal increase in the individual earnings inequality in the 1990s, it rose for men, and not for women. More important from a welfare perspective is that family earnings inequality rose. (Picot, 1998, p. 4)

Income earnings of women are best described as a "good news/bad news" story. According to Clark (2001) the average total income equality index reveals that in 1997, women's incomes were 58% of men's and the total tax income index was somewhat higher at 0.63. However, when comparing earnings of women and men from a total earnings perspective (including no earnings and earnings part-time work) women fare less well. In 1997, the total earnings index was 0.54 with women earning $16,300 and men earning $29,900. Yet, women work more hours than men. The total workload index, which includes both paid work and unpaid work decreased from 1.08 in 1986 to 1.04 in 1998. In other words, Canadian women 15 years or older were engaged in paid or unpaid work for 7.8 hours per day; the comparable figure for men was 7.5 hours. According to Clark, "while the gap is shrinking, women work an average of about 15 minutes more per day than men. This imbalance in total work seems to be greatest for young women aged 15 to 24 (1.18) and for senior women (1.11) while women aged 45 to 54 experience near equity (1.01)" (p. 4-5).

Picot (1998) explains that as a result of several offsetting trends, increased polarization of women's and men's wages remained rather stable between the mid-1980s and mid-1990s. First, whereas over this period lower paid men's earnings declined and higher paid men's earnings increased, earnings remained stable among women, According to (Picot & Heisz, 2000), the 1990s were a period of "rising male inequality but stable female inequality" (p. 4). Young men under the age of 35 experienced declines in their real earnings whereas other groups (e.g., women, higher paid men, older workers) experienced gains. By focussing on women and men separately, Picot (1998) observes that

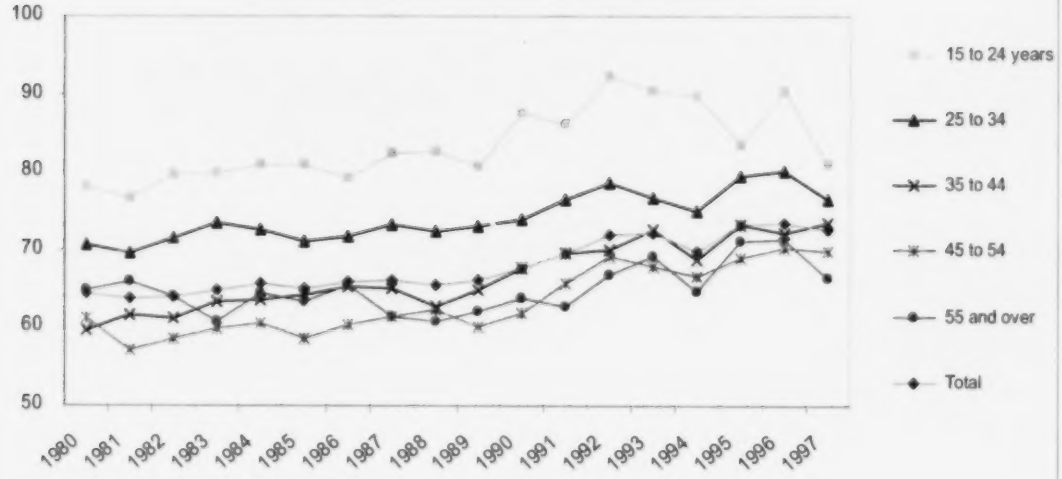
> among men the rich are getting richer, the poor poorer. The familiar pattern is observed of declines in earnings among lower paid workers with increases among the higher paid. This occurred during all three periods, and in dramatic fashion. Over the 1980s, earnings

> among employed men in the bottom three deciles fell by around 13%, while rising by 1.0% and 4.3% in the top two deciles . . . .A similar story is observed over the 1986 to 1995 period, as the bottom decile fell by 9%, while rising 5% among those at the top. Virtually all employed women, on the other hand, saw their earnings increase. There were substantial increases at the bottom of the distribution of 10% to 20% over the 1980s, and from 0% to 13% between the mid-1980s and mid-1990s, largely due to more weeks worked. (p. 3.5)

However, despite earnings gains by women, Picot notes that men continued to earn considerably more than women. In 1995, the income gap between women and men in the top decile was $24,000 and $700 in the bottom decile.

It is difficult to locate studies on income earnings of young women. Canadian data (Statistics Canada, 1997) reveal that income disparities between women and men are least for the 15 to 24 age group (Figure 17). In 1992, the earnings gap was the lowest at 92%, then hovered around 90% until 1995 when it dropped to 84%, then further declined to 81% in 1997. Over the 17 years since 1980, young women aged 25 to 34 earned 70% to 80% of men in the same age group. By 1997, the gap had widened to 76%.

Figure 17. Female to Male Earnings Ratios for Full-year Full-time Workers by Age, Canada, 1980 to 1997



Source: Statistics Canada. Cat. 13-217-XIB

Using panel data collected in the National Graduates Surveys on graduates in the years 1982, 1986, and 1990, Finnie (2001b) explored the following questions: "How do earnings levels evolve over the early years in the labour market? To what extent do graduates use the skills they have acquired at school, and how do their qualifications relate to the prerequisites of the job?" (p. 7). He found that overall, mean earnings increased by educational level over each five year time span. Women's earnings ranged from 75% to 98% of men's with inequalities increasing at higher educational levels. Income disparities between women and men were smallest in more recent cohorts. Lower mean earnings for women were compounded by smaller increases in earnings over time. That is, although mean earnings grew for women and men over five years following graduation, for each cohort at all educational levels, increases were greater for men than women. For example, for the 1990 cohort, men with bachelor's degrees experienced a 23% increase in their mean earnings (from $35,100 to $43,200); women with the same educational credentials experienced only a 12% increase (from $32,600 to $36,600). Also, Finnie examined the distribution of changes in individuals' earnings from two to five years following graduation. For all cohorts and across all educational levels, except at the doctoral level for the 1986 and 1990 cohort, women were more likely than men to experience large (greater than 10%) or small (0 to 10%) declines in their earnings. Men who completed college or bachelor's level education were more likely than women to experience medium (10 to 50%) or large (greater than 50%) increases. Only at the masters and doctoral levels were women equally or more likely than men to experience larger changes in income over time.

6.2 Income and Family Status

Income and family status are closely related. According to Lindsay (2000) not only do "lone parent families headed by women have, by far, the lowest incomes of all family types" but "there has been no change in the average income of female-headed lone parent families in the past two decades" (p. 137). In 1997, the average incomes of lone parent families headed by women were 35% less than those headed by men and 61% less than two-parent families with children.

In 1997, women who headed lone-parent families were twice as likely as men lone-parent families to have incomes lower than the Low Income Cut-off; only 24% of men compared to 56% of women fell below this low income designation. In 1980, this figure for women

lone-parents was 57% indicating virtually no improvement in the income status of women who raise children on their own (Lindsay, 2000).

(Picot & Heisz, 2000) report that between the 1980s and 1990s, whereas earnings inequality has changed little among employed *individual* men and women, there were substantial increases in inequality among *families.* They suggest that increases in both the number of lone-parent families and the number of marriages among individuals with similar levels of earnings are responsible for widening the earning inequality gap among families. This, together with reductions in government transfers to low income families in the mid 1990s, resulted in an increase in low-income intensity, which is defined as the combination of changes in the low-income rate and low-income gap. Stout and Kipling (1998) report that 55% of on-reserve Aboriginal women and 51% of Inuit women earned less than $10,000 in 1991; comparable figures for on-reserve Aboriginal and Inuit men are 41% and 36%, respectively. They maintain that low incomes for Aboriginal women is a result of a combination of reliance on government transfer payments as their major source of income, part-time work, and low salaries.

The income status of parents, of course, affects the well-being of their children. In 1997, only 13% of children lived in female headed lone-parent families. However, they represented 40% of all children living in low income families in Canada in 1997 (Lindsay, 2000); in 1990, this figure was 47% (Oderkirk, 1992). According to Lochhead and Scott (2000), these families are at much greater risk of persistent poverty. As reported earlier in this paper, 19% of families with children are lone parent families and 83% of lone parent families are headed by women (Almey, 2000). Townson (2000) asserts that while Canadians are "justifiably concerned about the increasing numbers of children growing up in poverty, we have tended to overlook the fact that children are poor because their parents are poor. And it is the poverty of women that is behind the poverty of so many of our children" (p. 1). The wide reaching implications of poor young families are addressed in a series of recent reports by the Canadian Policy Research Networks on topics such as policies – and the paradigms underpinning them – on children and families (Beauvais & Jenson, 2001; Stroick & Jenson, 1999), family status and tax fairness (Krashinsky & Cleveland, 1999), and affordable family housing (Cooper, 2001).

In a study documenting family earning patterns, Crompton & Geran (1995) report that between 1967 and 1993, the proportion of dual-earner husband-wife families in Canada increased from 33% to 60%. During the same time period, wives' earnings increased in relation to their husbands. In 1967, women earned 42% as much as their husbands; by 1993, this figure increased to 57%. Related to this is the increase in the proportion of women who earn more than their husbands. Between 1967 and 1993, this figure increased from 11% to 25%, with the largest jump (6%) occurring between 1989 and 1993. The proportion of women earners in single-earner families also increased from 2% in 1967 to 20% in 1993.

Changing family income dynamics are a result of several factors. First, Crompton & Geran (1995) report that although women have experienced increases in their occupational status, these increases also reflect job loss and income reduction experienced by men in the late 1980s and early 1990s. Also, despite being the primary-earner, women continued to earn less than men. In 1993, the average salary of wives who were primary-earners was $31,000 compared to $43,250 for primary earner husbands – a difference of 30%. Even though more primary earner wives than husbands were employed as managers and professionals, their average salaries were a third less than men in the same occupational categories. Non-professional wife primary-earners (of whom 80% were clerical and service workers) fared considerably worse. Crompton & Geran provide two explanations for income discrepancies between single-earner wives and husbands. First, only 86% of women compared with 96% of men worked part-time. Also, women tended to be slightly younger and hence may have had less experience in the labour force.

Some of Crompton & Geran's findings are supported in an earlier study by Grindstaff and Trovato (1990). Reporting that approximately 60% of married women and just under 50% of mothers in the 20 to 29 age group were employed in 1981 (the age range in which most women marry), Grindstaff and Trovato concluded that "clearly, the dual wage-earner family is a major force on the Canadian economic scene" (p. 229-230). Informed by human capital theory and the literature on sex-roles, they employed 1981 Census data to explore contributions to family income by 30-year-old ever-married women. Cross-tabulations and step-wise logistic regressions revealed that higher levels of human capital in the form of education, work experience, type of work, and employment status by women were related to lower differences in contributions between wives and husbands to total family income. However, regardless of high levels of

human capital achievement, women remain "junior economic partners . . . . that relates in a very important way to long established structural inequalities that can only be rectified through legal and normative changes relating to sexual prejudice and discrimination" (Grindstaff & Trovato, 1990, p. 250).

6.3 Wage Discrimination

Studies on wage discrimination require researchers to tease out its effects in relation to other factors. Shapiro and Stelcner (1987) explain that both an endowments component and a discrimination component affect the extent to which an earnings gaps exists and persists. Whereas endowments consist of factors such as educational attainment, work experience, occupational status, and work status, the discrimination component "measures wage discrimination, defined as the extent to which observable female attributes are rewarded less highly than the comparable traits of males" (p. 464). However, Shapiro and Stelcner point out that studies that use indicators such as these are limited because they do not account for characteristics of jobs and employers, the effects of unionized wages, or fields of educational specialization. Most important, when trying to understand the transition experiences of young women, available data used in these analyses (*e.g.,* Census data) do not provide information on work interruptions. Instead, a proxy variable of potential work experiences is constructed by calculating a person's age minus years of schooling minus six. Shapiro and Stelcner comment that this proxy variable is reasonable "only in the presence of continuous labour force participation [but it] most likely... overstate[s] actual work experience for women with children whose participation in the labour force is interrupted by both child-bearing and child-raising activities" (p. 465). Furthermore, factors such as unequal division of household labour may result in lower levels of education for some women, and gender segregation in the work place will affect the extent to which wage discrimination can be accurately determined.

These limitations notwithstanding, Shapiro and Stelcner used 1981 Census data to determine the extent to which the earnings gap could be explained by endowment and discrimination variables. They concluded that although the earnings gap did decline,

> 53% of the reduction could be attributed to a decline in wage discrimination (i.e., differential returns to the same attributes), while just under one-half comes from

> improvements in female endowments of wage determining characteristics. Thus, the increase in the relative earnings of women reflects improvements in their productive traits as much as it reflects a reduction in the extent of wage discrimination. Therefore the *maximum* impact of equal pay initiatives would be to have raised the ratio of female to male wages from 0.60 to 0.63 [0.60 + 0.53(0.66 – 0.60)]. Although the observed gap did close over the decade, the portion of the (reduced) differential attributable to wage discrimination actually rose from 63% to 65.5% of the gap. (Shapiro & Stelcner, 1987, p. 466).

Shapiro and Stelcner (1987) concluded that the "combination of unequal rewards for comparable productive characteristics, occupational segregation, and the household division of labour all continue to work to the disadvantage of women" (Shapiro & Stelcner, 1987, p. 466). This conclusion is supported by a study comparing the gender wage gap in Australia and Canada. Using 1989 Canadian Labour Market Activity Survey (LMAS) data and 1989-1990 Australian Income Distribution Survey (IDS), Kidd and Shannon (1996) found that on average, women earned 33% less than men in Canada and only 15% less in Australia. They attribute a lower gender wage gap in Australia as the result of a higher degree of wage compression due to a more centralized system of wage determination and a stronger union movement.

Leck, St. Onge and Lalancette (1995) point out that employment discrimination is another variable which is often unaccounted for in wage gap studies. They maintain that despite equal pay legislation, white males have an advantage over other groups (including women, and minorities) in being hired, promoted, and receiving higher levels of pay. They argue that Canada's *Employment Equity Act* (1986) can be deemed successful only if women and other disadvantaged group members have gained access to higher paid jobs and the same 'pay potential' as their white male counterparts.

Using data on the 376 organizations subject to Canada's *Employment Equity Act* from 1989 to 1993, they examined the extent to which employees from different equity groups earned similar and the average pay earned by each group. Their results demonstrate that the wage gap has decreased between white men and those in lower to middle salary brackets, including white women, disabled women, visible minorities, and aboriginal peoples. However, their research also demonstrated that the wage gap has increased for those in higher salary ranges with the most rapid increase for white men who earn $40,000 or more.

Even though the proportion of white women in upper management positions has increased, Leck et al. maintain that "they are not paid accordingly" (p. 394). In addition, although the wage gap decreased most rapidly for middle income white women and more rapidly for minority men, it has widened for visible minority, aboriginal, and disabled women. Leck et al. conclude that organizations subject to the *Employment Equity Act* are slowly making progress toward reducing wage gaps among employee groups.

Another limitation to research on the gender wage gap is a failure to incorporate family dynamics into the analyses. Gittleman and Joyce (1999) undertook a study to examine the relationship of demographic and economic factors on mobility trends in the United States. They used 1968 to 1992 data from the Panel Study on Income Dynamics (PSID) and focused on the individual as the unit of analysis to answer the following questions: "Have the recent gains in women's earnings relative to men's also narrowed gender differences in the economic impact of . . . life events (such as divorce or widowhood)? And how has the transformation of American families that has occurred in recent decades affected mobility trends" (p. 299-300).

A key finding of this study is that for men in the bottom and middle quintiles, divorce increased the probability of upward mobility. However, women in all income categories were more likely than men to experience downward mobility in income distribution following divorce. Widowhood has a similar but less profound effect on women; for men, no substantial economic impact was demonstrated.

Marriage, on the other hand, is related with upward transitions in income categories. These findings hold for women in low, middle, and upper income quintiles. For men in all quintiles except the highest, marriage has a similar, but lesser effect. According to Gittleman and Joyce, "for men in the bottom quintile, a marriage is associated with a 0.18 increase in the probability of moving upward; for women, the increase is 0.42" (p. 309). Analyses of the effects of marriage and divorce by age did not produce statistically significant findings, and higher levels of education appear to be associated with an increased likelihood of upward mobility regardless of marital status. More experience in the labour force appeared to provide some degree of protection against downward mobility for women. As predicted, parenthood, especially for single women, led to the increased likelihood of moving to a lower income category.

7. Summary and Implications for Further Research

In preparing this paper, two key impressions emerged: how much we know, and how little has changed. Whether referring to participation in mathematics and science, different fields of study at post-secondary institutions, employment status, family responsibilities in relation to work, or the income earnings gap, phrases "remarkably stable" and "stable female inequality" recur throughout the research literature. When examined at the macro level, positive changes in participation by women in education and work and in income earnings have occurred. However, such "bloodless accounts" (Stout & Kipling, 1998) of persistent stability mask the educational, occupational, and earnings outcomes for certain groups. The least advantaged continue to be female lone parents and low income families.

Recommendations for further research should be tied to policy priorities of federal and provincial governments. It would seem logical that once policy directions are established, research studies should be designed to: (1) facilitate desired changes through action-oriented or evaluation research, and (2) monitor the extent and rate of change over time.

Although not targeted at specific policies, several recommendations for further research do emerge from the studies reviewed in this paper. These recommendations are organized according to the sections presented in the body of this paper.

7.1 School Subject Choice and Attainments by Girls and Boys

Further research is needed on attitudes to school subject choice, including mathematics and science. Research should focus on attitude development, shift in attitudes, and how to enhance positive attitudes toward all subjects. Studies should be carried out at the elementary and middle school levels and should involve students, teachers and parents. Longitudinal research designs are necessary to document changes in attitudes, course selection, post-secondary field chosen, and eventual occupational attainment. Also, studies with an action or intervention research component may reveal existing or perceived barriers to the study of school subjects and identify critical moments when attitudes change.

Second, examining images of fields of study and related resources, teaching strategies, and classroom experiences, may help to further uncover how perceptions toward school subjects develop and persist. Studies should extend beyond the classroom into faculties of education pre-service and in-service teacher education programs to determine how prospective teachers learn about gender inequities and biases. Third, more research is needed to highlight how gender, social class, and race/ethnicity work together to promote or hinder participation and achievement in various school subjects.

7.2 Post-Secondary Participation and Completion Patterns by Young Women and Men

Documenting changes in women's and men's participation in institutions of higher education is critical in providing an initial assessment of access to institutional and program type. Researchers should be encouraged to disaggregate their analyses by field of study, or as Gadalla (2001) has done, by programs within fields of study. These studies, although illuminating, do not provide explanations for stability or change in enrolment and completion patterns. Existing national data could be improved by making more age-related information available to researchers. As indicated earlier, because the purpose of this paper was to examine the transition experiences of young women, published Statistics Canada data on community college enrolment is not very useful in detecting differences in participation and completion of studies by institutional type.

In addition, more studies of young women's and men's journeys through elementary, secondary, and post-secondary institutions by race/ethnicity and social class will allow an assessment of whether post-secondary education is moving toward mass or universal educational levels or the degree to which it is reverting to a system for the elite. Also, because of provincial differences (*e.g.*, the nature of the community college system, tuition and student financial aid policies, degree of interinstitutional articulation), the extent to which the structures and policies of each provincial post-secondary system enhance or hinder opportunities for access and program completion by both advantaged and disadvantaged groups of women and men requires monitoring. Comparative studies of provincial systems or international comparisons – by gender – should be encouraged. Although increased post-secondary participation and program completion by women should have positive effects on their subsequent labour force participation and

occupational status (Picot & Heisz, 2000; Shapiro & Stelcner, 1987), detailed analyses are required to unravel the underlying causes of inequities in distributional outcomes of educational gains by young women that, according to Picot and Heisz (2000), remain puzzling.

7.3 Career Expectations of Young Women

Further research on career expectations of young women must begin by rethinking conceptual and analytical models of the occupational expectation to actual occupational status transition by both young women and men. The assumptions behind models "order" and "disorder" and those grounded in rational choice and human capital theories (such as research conducted by Rindfuss, Cooksey & Sutterlin, 1999) should not be taken as given, but instead should be problematized. How do young people make decisions about future careers? To what extent do they possess knowledge about jobs, careers, and the labour market? When young people respond to survey items asking about occupational expectations, why do they give the answers they give? Larger scale studies along the lines of the research conducted by Hughes-Bond (1998) would further illuminate young women's (and men's) understandings about the multiple life roles they are likely to occupy. Actions and behaviours of teachers and counsellors should also be examined to in order to develop policies and practices to ensure that both young women's and men's perspectives are included, respected, and validated.

7.4 Employment, Family and Income Earnings

Studies on employment, family, and income earnings must begin by acknowledging that women's lives always have been "disordered." Perhaps the idea of "transition" is not particularly useful in describing and analyzing adult women's lives. Zerubavel's (1981) notions of multiple life sphere participation and differences between linear time and process time may provide a better conceptual base for understanding transitions from one stage to another. These concepts can be used to illustrate that throughout their adult – and working – lives, most women will simultaneously adopt multiple roles and deal with multifaceted demands. And, according to Gee (1990), for today's young women, these roles and demands are likely to increase. Recognition alone is not enough. As Krüger & Baldus (1999) assert,

> the consistent lack of positive cultural categories for the combination of paid employment and the family for women for the past 50 years or so suggests that we are indeed looking

> at more permanent forms of cultural pressure which deny certain avenues of self-evaluation to women because of their disorderly involvement in family and work.. . .The obvious policy implication is that no tinkering with values or definitions is likely to make much difference in this situation. Only a more profound institutional restructuring will bring about real change. (Krüger & Baldus, 1999, p. 375)

Given the stability in female inequality of educational and occupational outcomes and income earnings demonstrated in numerous studies, research conducted with the primary purpose of highlighting the interrelationships among institutional structures and the life chances of individuals is warranted.

Studies conducted by economists, demographers, sociologists, historians, social psychologists, policy analysts, and researchers in the area of family studies, as documented in this paper, provide unique theoretical and analytical perspectives on the relationship among employment, family, and income earnings. However, constraints imposed by such disciplinarity could be transcended by interdisciplinary research embracing multiple conceptual and analytical perspectives.

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